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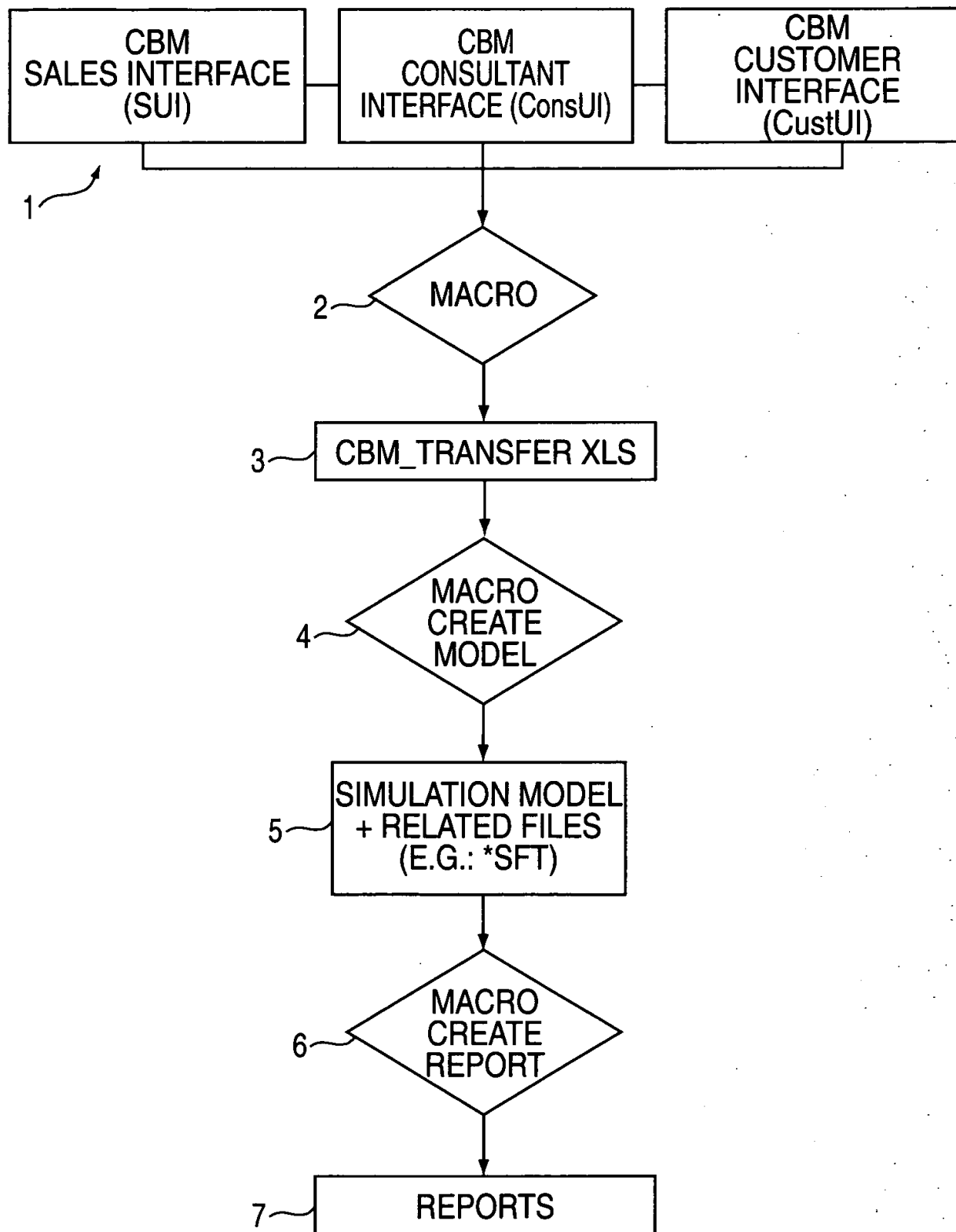


FIG. 1

09873023-050101

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27		Build your project and set up the directory for experiments								
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Workflow

Create Project

Shift Data

Line Configuration

Board Data

Create Simulation

Save and Exit

FIG. 2

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FIG. 2A

A				Name	Size	Type	Date & Time
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FIG. 3

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FIG. 4

TOT090" E20E2860

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
31				12	7:00		12:00	13:00				15:00	15:00			20:00	21:00			23:00	23:00
32				13	7:00	8:00	8:15	12:00	12:30	15:00	15:15	19:30	19:30	20:00	20:15	0:00	0:30	3:00	3:15	7:00	
33				14	7:00		12:00	13:00				15:00	15:00			20:00	21:00			23:00	23:00
34				15																	
35				16																	
36				17																	
37				18																	
38				19																	
39				20																	
40				21																	
41				22																	
42				23																	

FIG. 4A

V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
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3																			
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FIG. 4B

	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
31			4:00	5:00			7:00	→Customer 1												
32								→Customer 2												
33			4:00	5:00			7:00	→Customer 3												
34								→Customer 4												
35																				
36																				
37																				
38																				
39																				
40																				
41																				
42																				

FIG. 4C

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S											
<div>Line Configuration</div> <div>Insert</div> <div>Delete</div> <div>Database</div> <div>Main</div> <div>Return to the Main page</div>																			1										
																			2	insert									
3	row																												
4	delete row																												
5																													
6																													
7																													
8																													
9	1	7300 Buffer																											
10	2	7511 Conveyor 1060																											
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FIG. 5

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
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FIG. 5A

	AU	AV	AW	AX	AY	AZ
1						
2						Bare Board Loader
3						Buffer
4						Conveyor 1060
5						Conveyor 1590
9						Conveyor 2380
10						F4 x 2 / SPL
11						F4 x 3 / SPL
12						F5
13						F5 x 2 / SPL
14						F5 x 3 / SPL
15						Flip Station 180
16						HS-50
17						HS-50 x 2 / SPL
18						HS-50 x 3 / SPL
19						Last Lift
20						Magazine Buffer MB100
21						Magazine Buffer MB50
22						Magazine Loader ML02
23						Magazine Loader ML05
24						Magazine Unloader MIJ02
25						Magazine Unloader MIJ05
26						Printer pro-flow
27						Printer pro-flow temp control
28						Printer squeegee operation
29						Printer squeegee operation temp control
30						RX 261
31						RX 262
32						RX 331
33						RX 332
34						RX 411
						RX 412

FIG. 5B

	AU	AV	AW	AX	AY	AZ
35				S-20		
36				S-23		
37				S-25		
38				Shuttle-1 lane to 2 lane		
39				Shuttle-2 lane to 1 lane		
40				Telescopic Gate TG		
41				Turn Station TS		

FIG. 5C

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S												
Line Configuration																			Insert			Delete			Database			Main		
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3	delete row																													
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9	1	7300																												
10	2	7511																												
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	# of access cells	transport system		assists (min/min)		maintenance (h/min) shift				failure (h/min) level 1		grafic		month		maintenan qu	
		S/D- Lane	synch asynch	MTBA	MTTR	MTBA	MTTR	MTBM	MTTR	MTBF	MTTR	X	offset	MTBM	MTTM		MTBM
0	0	0	0	60	1	0	0	0	0	0	0	0	100	0	680	0	4080
0	0	1	1	60	1	0	0	163.2	0	0	0	200	0	680	0	4080	

FIG. 6

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
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FIG. 7

FOF090" E20E2860

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
33	F4 x 2/SPL	1042	1	1	2	60	1						450			163.20		680.00
34	F4 x 3/SPL	1043	1	1	3	60	1						875			163.20		680.00
35	F5	1050	1	1	1	60	1						200			163.20		680.00
36	F5 x 2/SPL	1052	1	1	2	60	1						450			163.20		680.00
37	F5 x 3/SPL	1053	1	1	3	60	1						875			163.20		680.00
38	Flip Station 180	7580	1	1	0	60	1						200			163.20		680.00
39	HS-50	1500	1	1	2	60	1						400			163.20		680.00
40	HS-50 x 2/SPL	1502	1	1	4	60	1						850			163.20		680.00
41	HS-50 x 3/SPL	1503	1	1	6	60	1						1250			163.20		680.00
42	Last Lift	7500	0	0	0	60	1						700			163.20		680.00
43	Magazine Buffer MB100	7320	0	0	0	60	1						100			163.20		680.00
44	Magazine Buffer MB50	7310	0	0	0	60	1						100			163.20		680.00
45	Magazine Loader ML02	7600	1	1	0	60	1						200			163.20		680.00
46	Magazine Loader ML05	7610	1	1	0	60	1						200			163.20		680.00
47	Magazine Unloader MU02	7601	1	1	0	60	1						200			163.20		680.00
48	Magazine Unloader MU05	7611	1	1	0	60	1						200			163.20		680.00
49	Printer pro-flow	9003	1	1	1	60	1						200			163.20		680.00
50	Printer pro-flow temp control	9004	1	1	1	60	1						200			163.20		680.00
51	Printer squeegee operation	9001	1	1	1	60	1						200			163.20		680.00
52	Printer squeegee operation temp control	9002	1	1	1	60	1						200			163.20		680.00
53	RX 261	8001	1	1	1	60	1						700			163.20		680.00
54	RX 262	8002	1	1	1	60	1						700			163.20		680.00
55	RX 331	8003	1	1	1	60	1						700			163.20		680.00
56	RX 332	8004	1	1	1	60	1						700			163.20		680.00
57	RX 411	8005	1	1	1	60	1						700			163.20		680.00
58	RX 412	8006	1	1	1	60	1						700			163.20		680.00
59	S-20	1200	1	1	1	60	1						200			163.20		680.00
60	S-23	1230	1	1	1	60	1						200			163.20		680.00
61	S-25	1250	1	1	1	60	1						200			163.20		680.00
62	Shuttle - 1 lane to 2 lane	7100	0	0	0	60	1						100			163.20		680.00
63	Shuttle - 2 lane to 1 lane	7200	0	0	0	60	1						100			163.20		680.00
64	Telescopic Gate TG	7550	1	1	0	60	1						150			163.20		680.00
65	Turn Station TS	7570	1	1	0	60	1						200			163.20		680.00
66																		680.00
67																		680.00
68																		680.00

FIG. 7A

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
33	F4 x 2 / SPL	1042	1	1	1	60	1									163.20		680.00
34	F4 x 3 / SPL	1043	1	1	3	60										163.20		680.00
35	F5	1050	1	1	1	60	1									163.20		680.00
36	F5 x 2 / SPL	1052	1	1	2	60	1									163.20		680.00
37	F5 x 3 / SPL	1053	1	1	3	60	1									163.20		680.00
38	Flip Station 180	7560	1	1	0	60	1									163.20		680.00
39	HS-50	1500	1	1	2	60	1									163.20		680.00
40	HS-50 x 2 / SPL	1502	1	1	4	60	1									163.20		680.00
41	HS-50 x 3 / SPL	1503	1	1	6	60	1									163.20		680.00
42	Last Lift	7500	0	0	0	60	1									163.20		680.00
43	Magazine Buffer MB100	7320	0	0	0	60	1									163.20		680.00
44	Magazine Buffer MB50	7310	0	0	0	60	1									163.20		680.00
45	Magazine Loader ML02	7600	1	1	0	60	1									163.20		680.00
46	Magazine Loader ML05	7610	1	1	0	60	1									163.20		680.00
47	Magazine Unloader MU02	7601	1	1	0	60	1									163.20		680.00
48	Magazine Unloader MU05	7611	1	1	0	60	1									163.20		680.00
49	Printer pro-flow	9003	1	0	1	60	1									163.20		680.00
50	Printer pro-flow temp control	9004	1	0	1	60	1									163.20		680.00
51	Printer squeegee operation	9001	1	0	1	60	1									163.20		680.00
52	Printer squeegee operation temp control	9002	1	0	1	60	1									163.20		680.00
53	RX 261	8001	1	1	1	60	1									163.20		680.00
54	RX 262	8002	1	1	1	60	1									163.20		680.00
55	RX 331	8003	1	1	1	60	1									163.20		680.00
56	RX 332	8004	1	1	1	60	1									163.20		680.00
57	RX 411	8005	1	1	1	60	1									163.20		680.00
58	RX 412	8006	1	1	1	60	1									163.20		680.00
59	S-20	1200	1	1	1	60	1									163.20		680.00
60	S-23	1230	1	1	1	60	1									163.20		680.00
61	S-25	1250	1	1	1	60	1									163.20		680.00
62	Shuttle - 1 lane to 2 lane	7100	0	0	0	60	1									163.20		680.00
63	Shuttle - 2 lane to 1 lane	7200	0	0	0	60	1									163.20		680.00
64	Telescopic Gate TG	7550	1	1	0	60	1									163.20		680.00
65	Turn Station TS	7570	1	1	0	60	1									163.20		680.00
66																163.20		680.00
67																163.20		680.00
68																163.20		680.00

FIG. 7B

TOT.090" 220E4860

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
69																163.20		680.00
70																163.20		680.00
71																163.20		680.00
72																163.20		680.00
73																163.20		680.00
74																163.20		680.00
75																163.20		680.00
76																163.20		680.00
77																163.20		680.00
78																163.20		680.00
79																163.20		680.00
80																163.20		680.00
81																163.20		680.00
82																163.20		680.00
83																163.20		680.00
84																163.20		680.00
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88																163.20		680.00
89																163.20		680.00
90																163.20		680.00
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94																163.20		680.00
95																163.20		680.00
96																163.20		680.00
97																163.20		680.00
98																163.20		680.00
99																163.20		680.00

FIG. 7C

S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1															
2	e(h/min)														
3	thly	quarterly	yearly	MTTM	MTTM	MTTM	MTTM	gratic	gratic	witness module single lane	witness module dual lane	inbound routing			
4	MTTM	MTBM	MTTM	MTTM	MTTM	MTTM	MTTM	length offset	length offset						
5	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
6	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
7	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
8	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
9	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
10	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
11	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
12	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
13	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
14	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
15	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
16	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
17	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
18	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
19	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
20	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
21	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
22	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
23	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
24	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	0	0						
25	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	200	0	BareBoard_Loader	Printermc	200			
26	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Buffers	B1	100			
27	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv2_1	con5_2001	100			
28	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv2_2	con5_2001	100			
29	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv3_1	con5_2001	100			
30	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv3_2	con5_2001	100			
31	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv4_1	con5_2001	100			
32	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv4_2	con5_2001	100			
33	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv5_1	con5_2001	100			
34	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	150	0	Conv5_2	con5_2001	100			
35	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	4080.00	200	0	S25 L1	Conveyor001	200			

FIG. 7D

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
33	4080.00			8160.00	600	0				S25Cluster2_L1	S25Cluster2	Lift1				450
34	4080.00			8160.00	900	0				S25Cluster3_L1	S25Cluster3	Lift1				875
35	4080.00			8160.00	200	0				S25_L1	S25	Conveyor001				200
36	4080.00			8160.00	600	0				S25Cluster2_L1	S25Cluster2	Lift1				450
37	4080.00			8160.00	900	0				S25Cluster3_L1	S25Cluster3	Lift1				875
38	4080.00			8160.00	200	0				Flip_Station		Printermc				200
39	4080.00			8160.00	350	0				HS50_L1	HS50	Conveyor001				400
40	4080.00			8160.00	900	0				HS50Cluster2_L	HS50Cluster2L	Lift1				850
41	4080.00			8160.00	1350	0				HS50Cluster3_L	HS50Cluster3L	Lift1				1250
42	4080.00			8160.00	100	0				Lastlift		Lift4				700
43	4080.00			8160.00	150	0				Buffer_Magazine100		B1				100
44	4080.00			8160.00	150	0				Buffer_Magazine50		B1				100
45	4080.00			8160.00	200	0				Magazine_Loader2		Printermc				200
46	4080.00			8160.00	200	0				Magazine_Loaders		Printermc				200
47	4080.00			8160.00	200	0				Magazine_Unloader2		Printermc				200
48	4080.00			8160.00	200	0				Magazine_Unloaders		Printermc				200
49	4080.00			8160.00	200	0				Printer		Printermc				200
50	4080.00			8160.00	200	0				Printer		Printermc				200
51	4080.00			8160.00	200	0				Printer		Printermc				200
52	4080.00			8160.00	200	0				Printer		Printermc				200
53	4080.00			8160.00	1400	0				Oven_1Lane	Oven_2	Oven_2001				700
54	4080.00			8160.00	1400	0				Oven_1Lane	Oven_2	Oven_2001				700
55	4080.00			8160.00	1400	0				Oven_1Lane	Oven_2	Oven_2001				700
56	4080.00			8160.00	1400	0				Oven_1Lane	Oven_2	Oven_2001				700
57	4080.00			8160.00	1400	0				Oven_1Lane	Oven_2	Oven_2001				700
58	4080.00			8160.00	1400	0				Oven_1Lane	Oven_2	Oven_2001				700
59	4080.00			8160.00	200	0				S25_L1	S25	Conveyor001				200
60	4080.00			8160.00	200	0				S25_L1	S25	Conveyor001				200
61	4080.00			8160.00	200	0				S25_L1	S25	Conveyor001				200
62	4080.00			8160.00	100	0				Shuttle1_2		Shuttle				100
63	4080.00			8160.00	100	0				Shuttle2_1		Shuttle				100
64	4080.00			8160.00	150	0				ConvTG		conv5_2001				150
65	4080.00			8160.00	200	0				Turn_Station		Printermc				200
66	4080.00			8160.00												
67	4080.00			8160.00												
68	4080.00			8160.00												

FIG. 7E

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
69		4080.00		8160.00												
70		4080.00		8160.00												
71		4080.00		8160.00												
72		4080.00		8160.00												
73		4080.00		8160.00												
74		4080.00		8160.00												
75		4080.00		8160.00												
76		4080.00		8160.00												
77		4080.00		8160.00												
78		4080.00		8160.00												
79		4080.00		8160.00												
80		4080.00		8160.00												
81		4080.00		8160.00												
82		4080.00		8160.00												
83		4080.00		8160.00												
84		4080.00		8160.00												
85		4080.00		8160.00												
86		4080.00		8160.00												
87		4080.00		8160.00												
88		4080.00		8160.00												
89		4080.00		8160.00												
90		4080.00		8160.00												
91		4080.00		8160.00												
92		4080.00		8160.00												
93		4080.00		8160.00												
94		4080.00		8160.00												
95		4080.00		8160.00												
96		4080.00		8160.00												
97		4080.00		8160.00												
98		4080.00		8160.00												
99		4080.00		8160.00												

FIG. 7F

	A	B	C	D	E	F	G	H	I	J	K	L	M
1					Main								
2					1	2	3	4	5	6	7	8	9
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

board #	board name	second side +	components per panel	up to 18.7 x 18.7	up to 32 x 32	up to 55 x 55	boards per panel	components per board	board for simulation	# name	pc
1	7300 Buffer									999	999
2	7511 Conveyor 1060									999	999

FIG. 8

	N	O	P	Q	R	S	T	U	V	W	X	Y
1												
2	10	11	12	13	14	15	16	17	18	19	20	21
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13	999	999	999	999	999	999	999	999	999	999	999	999
14	999	999	999	999	999	999	999	999	999	999	999	999

FIG. 8A

	Z	AA	AB	AC	AD	AE	AF	AG	AH
1									
2	22	23	24	25	26	27	28	29	30
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13	999	999	999	999	999	999	999	999	999
14	999	999	999	999	999	999	999	999	999

FIG. 8B

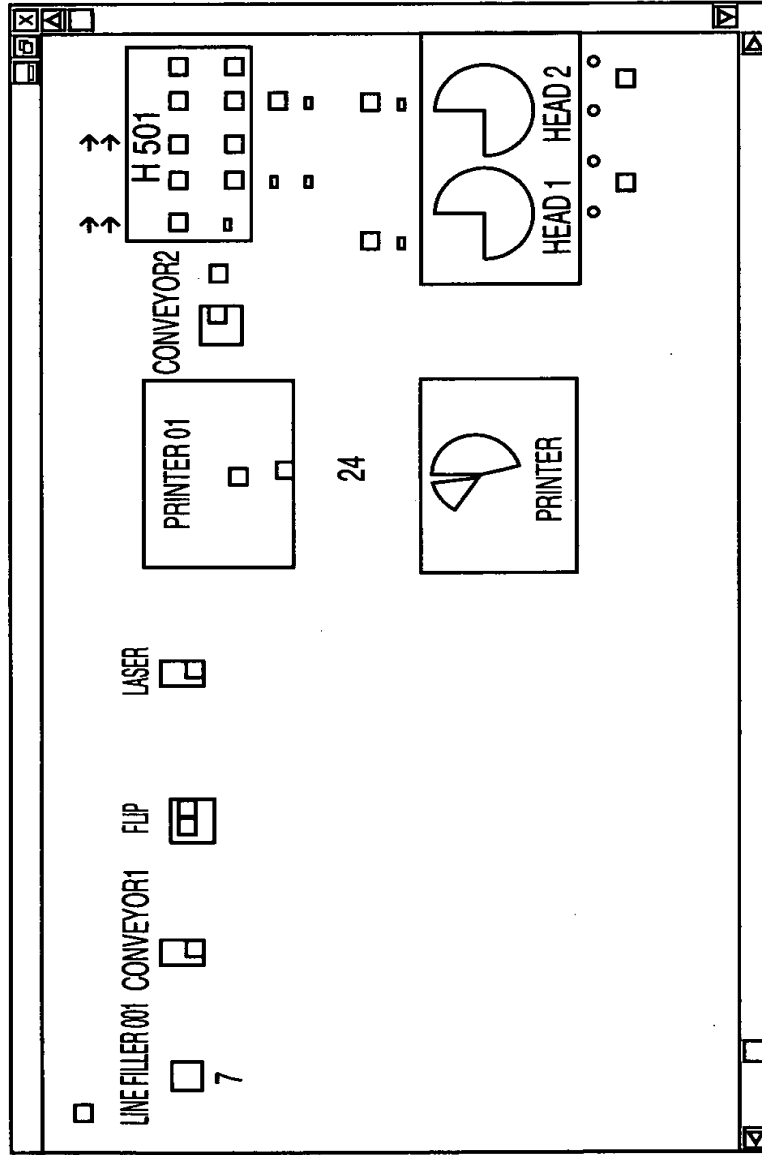


FIG. 9

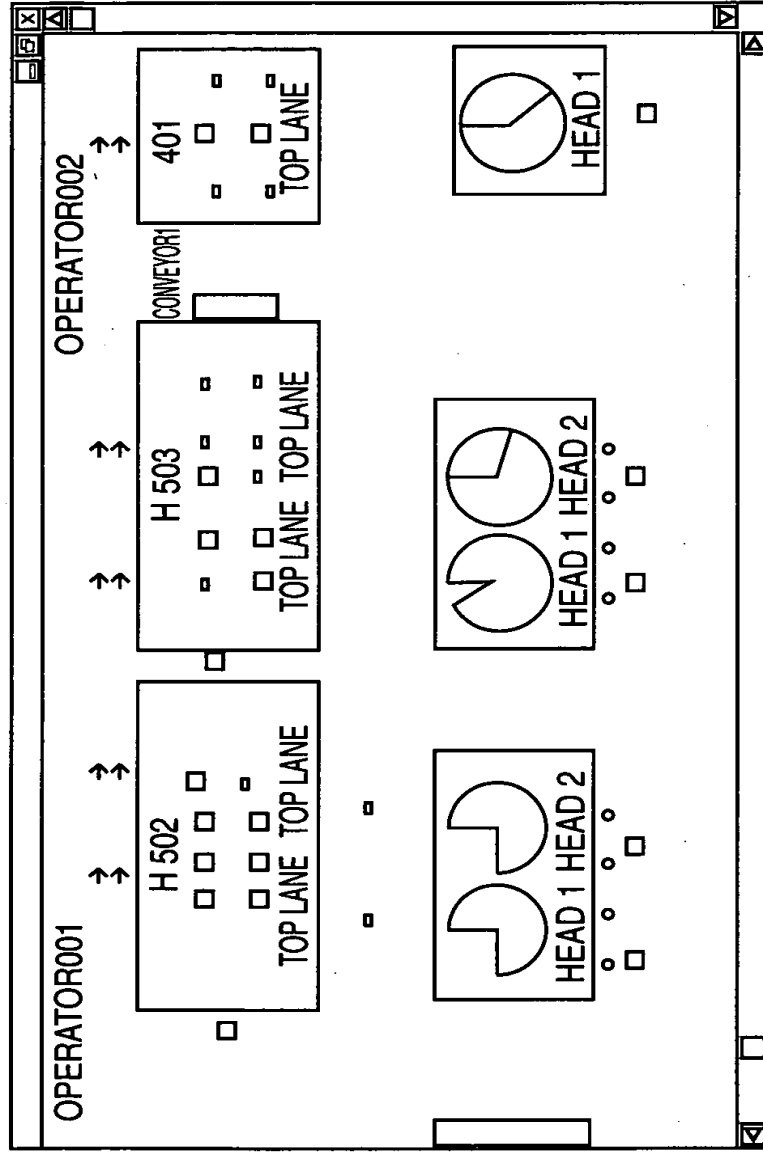


FIG. 9A

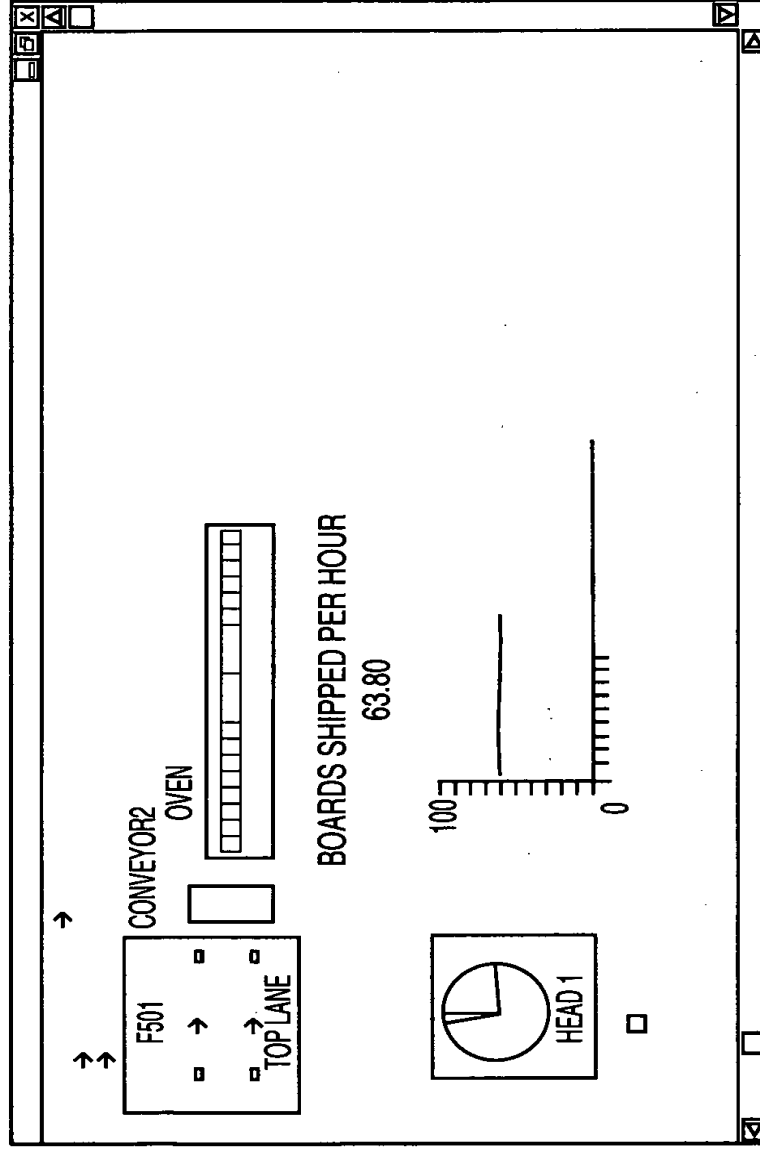


FIG. 9B

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												

Sheets

Boundaries

Setup

Quality

Maintenance

Summary

Graphs

Cost of Ownership

Machine Statistics

FIG. 10

	A	B	C	D	E	F	G
1	Boundaries						
2	Project	Test1 31/March 2001					
3	Date						
4							
5		default	project				
6	Financial						
7	Currency (Input)			0			
8	Currency (Output)			0			
9	Exchange ratio (In/Out)			0.00			
10	Depreciation			0.00%			
11	Interest Rate	0%					
12	Labor	0					
13	Operator			0.00			
14	Supervisor			0.00			
15	Maintenance			0.00			
16	Rework	0.00					
17	Utilities	0					
18	floor space (/year/spm)			0.00			
19	electricity (kWh)			0.00			
20	Nitrogen (???)			0.00			
21	air (???)			0.00			
22							
23							
24							
25							
26							

Main

Main

FIG. 11

	A	B	C	D	E	F	G
1	Setup						
2							
3	internal setup						
4	Operator labor per hour		0.00	hours			
5	setup changes every x h						
6	# of setup changes per week						
7	setup changes per year						
8	time per setup			min.			
9	setup time per year			0.00	hours		
10	internal setup costs						
11							
12	external setup						
13	external setup labour per hour			minutes per setup			
14	external setup						
15	external setup per year			0.00	hours		
16	Investment for external setup						
17							
18							
19	external setup costs per year						
20							
21	setup costs						

Main

FIG. 12

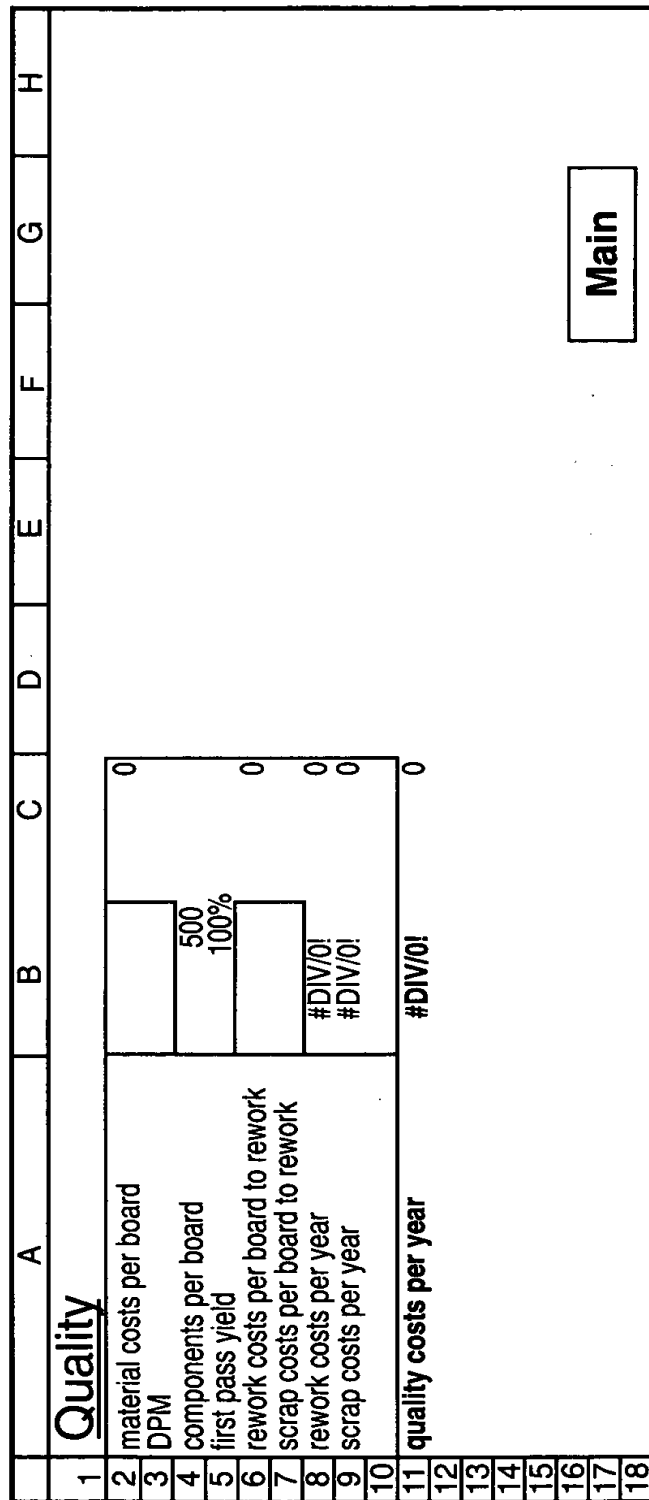


FIG. 13

	A	B	C	D	E	F	G	H	I
	Maintenance								
1			minutes	# of workers	who does maint.	downtime factor	line operator (h)	maint. team (h)	downtime (h)
2	line workers			0					
3	maintenance per shift (min)				1	100%	0.00	0.00	#DIV/0!
4	maintenance weekly (min)				1	100%	0.00	0.00	#DIV/0!
5	maintenance monthly add. (min)				2	100%	#DIV/0!	#DIV/0!	#DIV/0!
6	maintenance quarterly add (min)				3	100%	0.00	0.00	#DIV/0!
7	maintenance every x h add (min)				3	100%	0.00	0.00	#DIV/0!
8	maintenance time calculated (h)	10,000					#DIV/0!	#DIV/0!	#DIV/0!
9	labor costs						#DIV/0!	#DIV/0!	0
10									
11	maintenance costs per year								
12								#DIV/0!	0.000000 €
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

Main

FIG. 14

	A	B	C	D	E	F	F	H	I	J	K
Cost of Ownership											
1	Cost per year					Cost per board		%	Capacity		
2	Investment investment spareparts service	<div><div></div><div>%</div><div>%</div></div>		0	0	#DIV/0!	0	#####		hours available per year	0.00
3				0	0					internal setup	#DIV/0!
4				0	0					maintenance	#DIV/0!
5				0	0					quality	
6				0	0					technical availability	
7										hours total	#DIV/0!
8	Labor Operations Supervisor	<div><div></div></div>		#DIV/0!	0	#DIV/0!	0	#####		boards per hour	83.56
9				0	0					boards per shift	#DIV/0!
10				0	0					boards per week	#DIV/0!
11				#DIV/0!	0					boards per year	#DIV/0!
12											
13	Misc. Setup Maintenance			0	0	#DIV/0!	0	#####			
14				0	0						
15				#DIV/0!	0						
16				#DIV/0!	0						
17											
18	Utilities Floorspace Electricity Nitrogen Air	<div><div></div><div>sqm</div><div>kw</div><div>cbm/h</div><div>NI/min</div></div>		0	0	#DIV/0!	0	#####			
19				0	0						
20				#DIV/0!	0						
21				#DIV/0!	0						
22				#DIV/0!	0						
23	#DIV/0!	0									
24											
25	Quality rework costs per year scrap costs per year			#DIV/0!	0	#DIV/0!	0	#####			
26				0	0						
27				#DIV/0!	0						
28				#DIV/0!	0						
29											
30											
31	Costs per year					#DIV/0!	0	#DIV/0!	0		

FIG.15

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														

UTILITIES 9152

QUALITY

MISC 13209

INVESTMENT
127838

LABOR
53658

FIG. 16

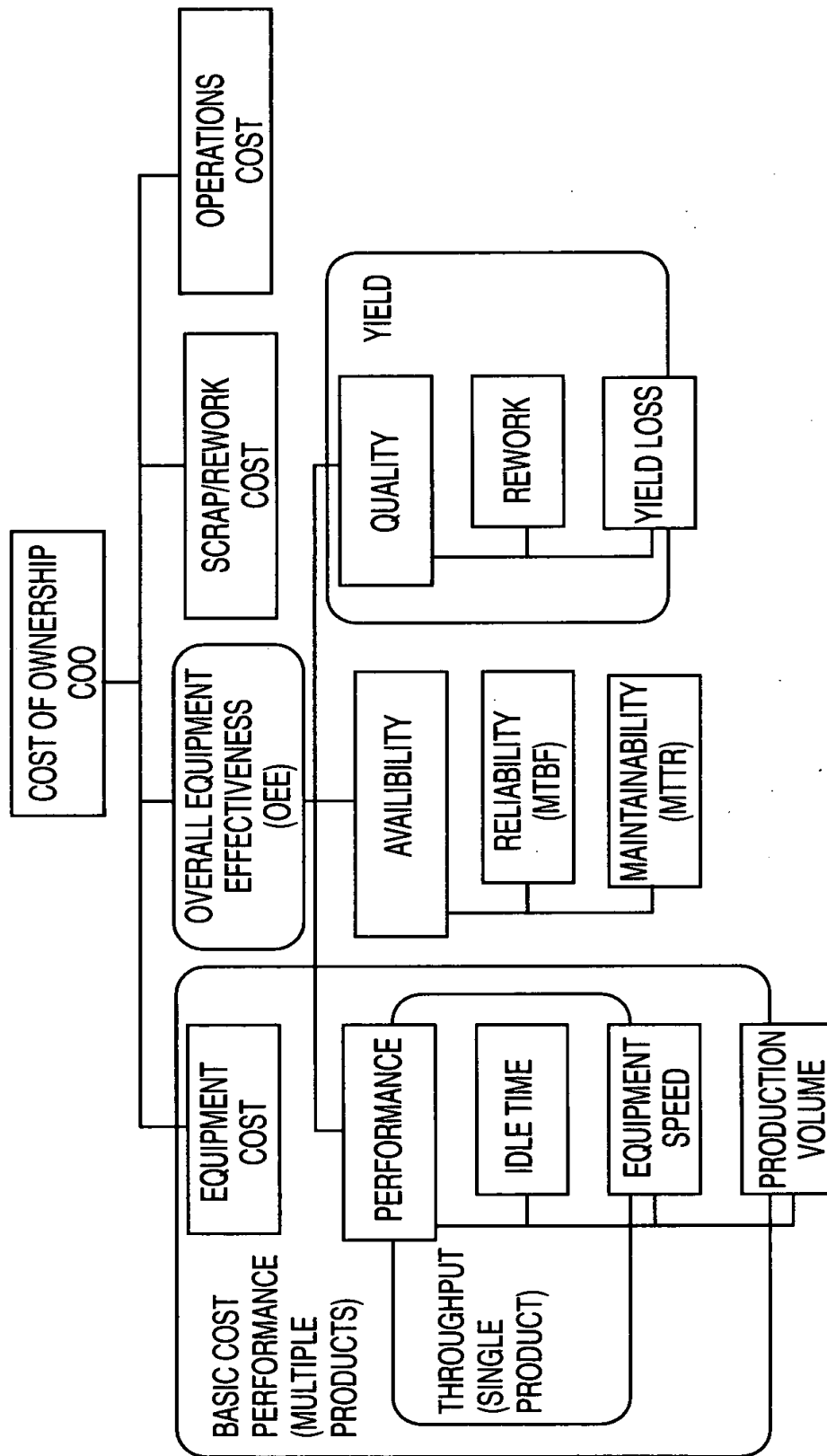


FIG. 16A

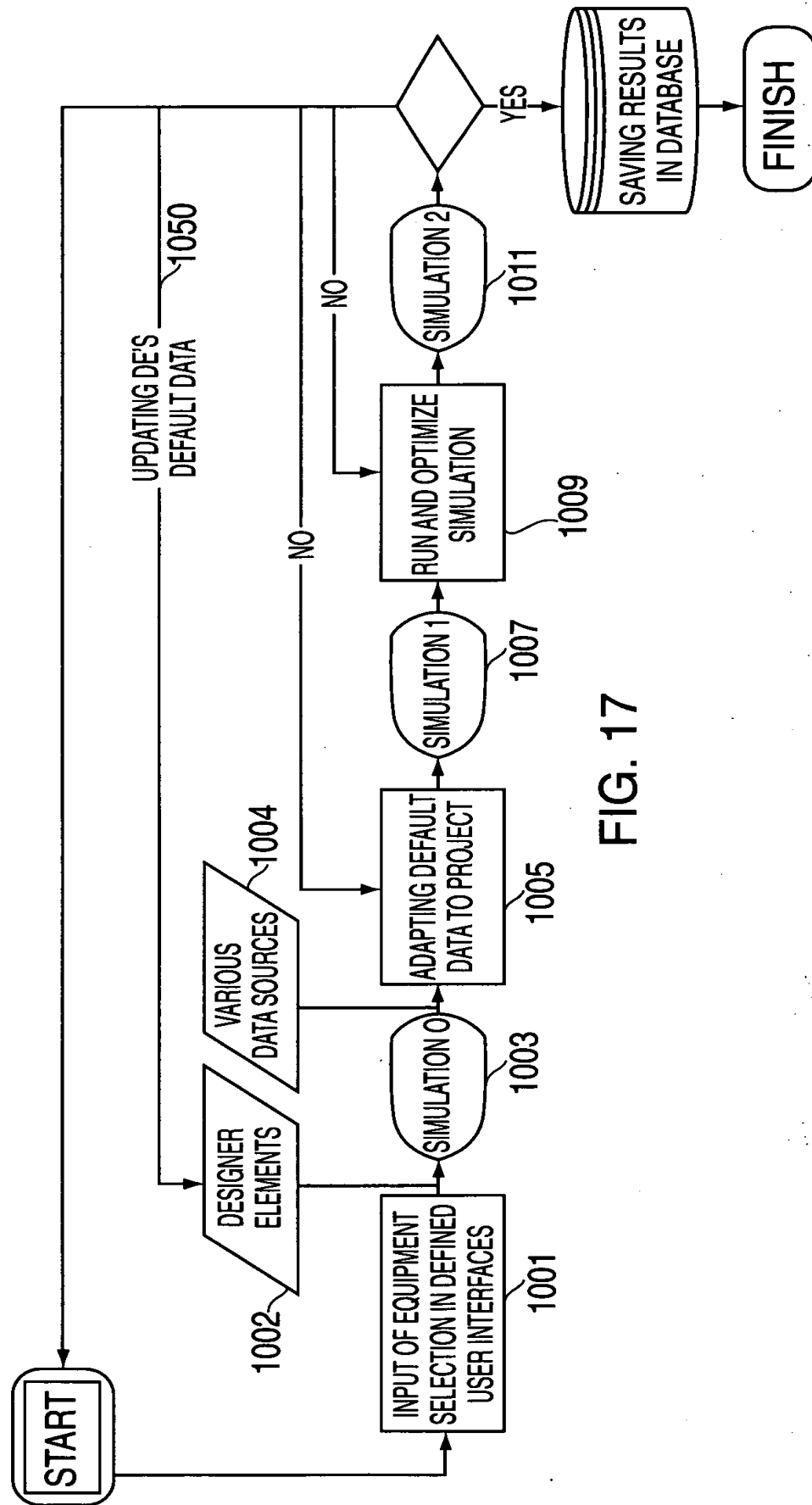


FIG. 17

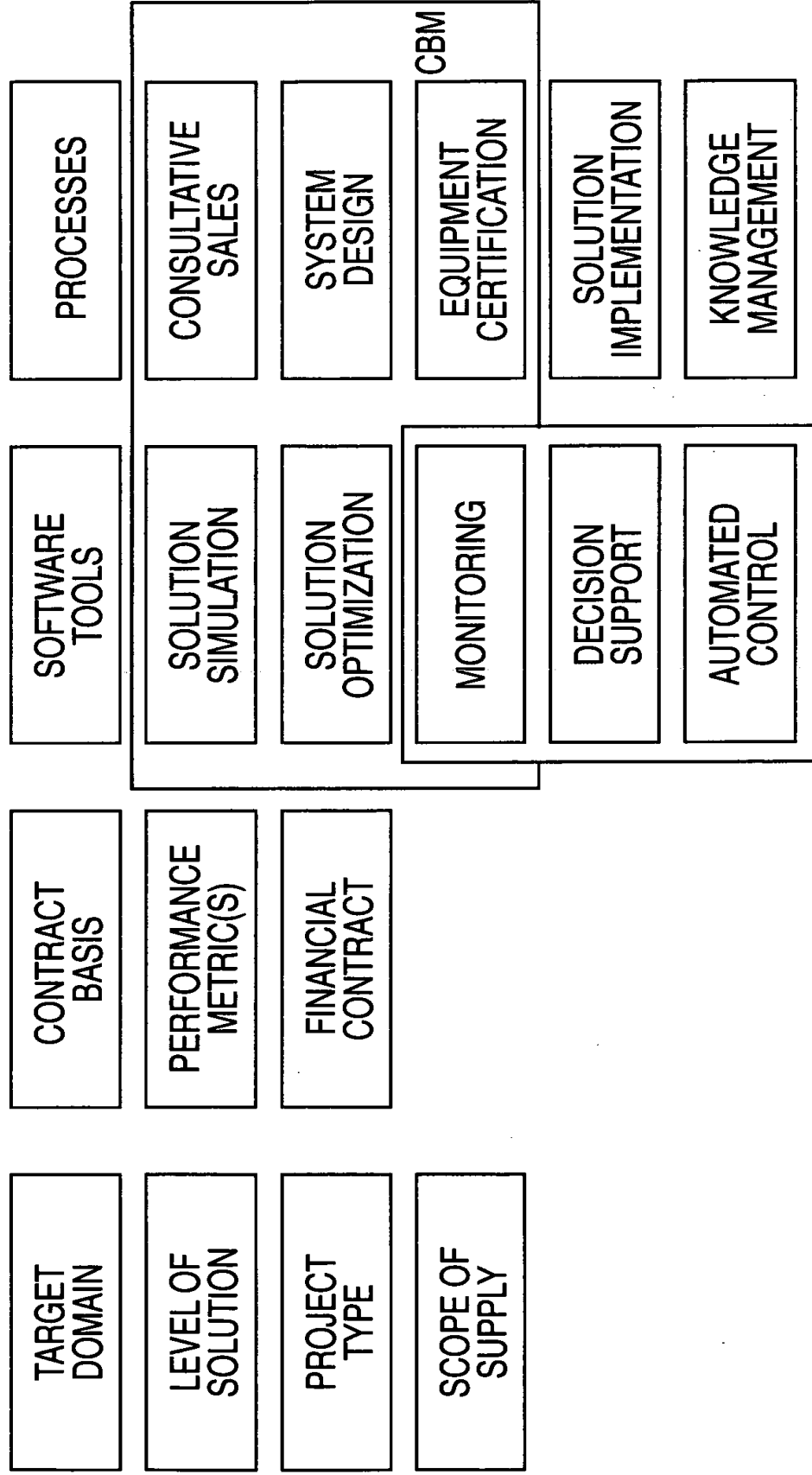


FIG. 18

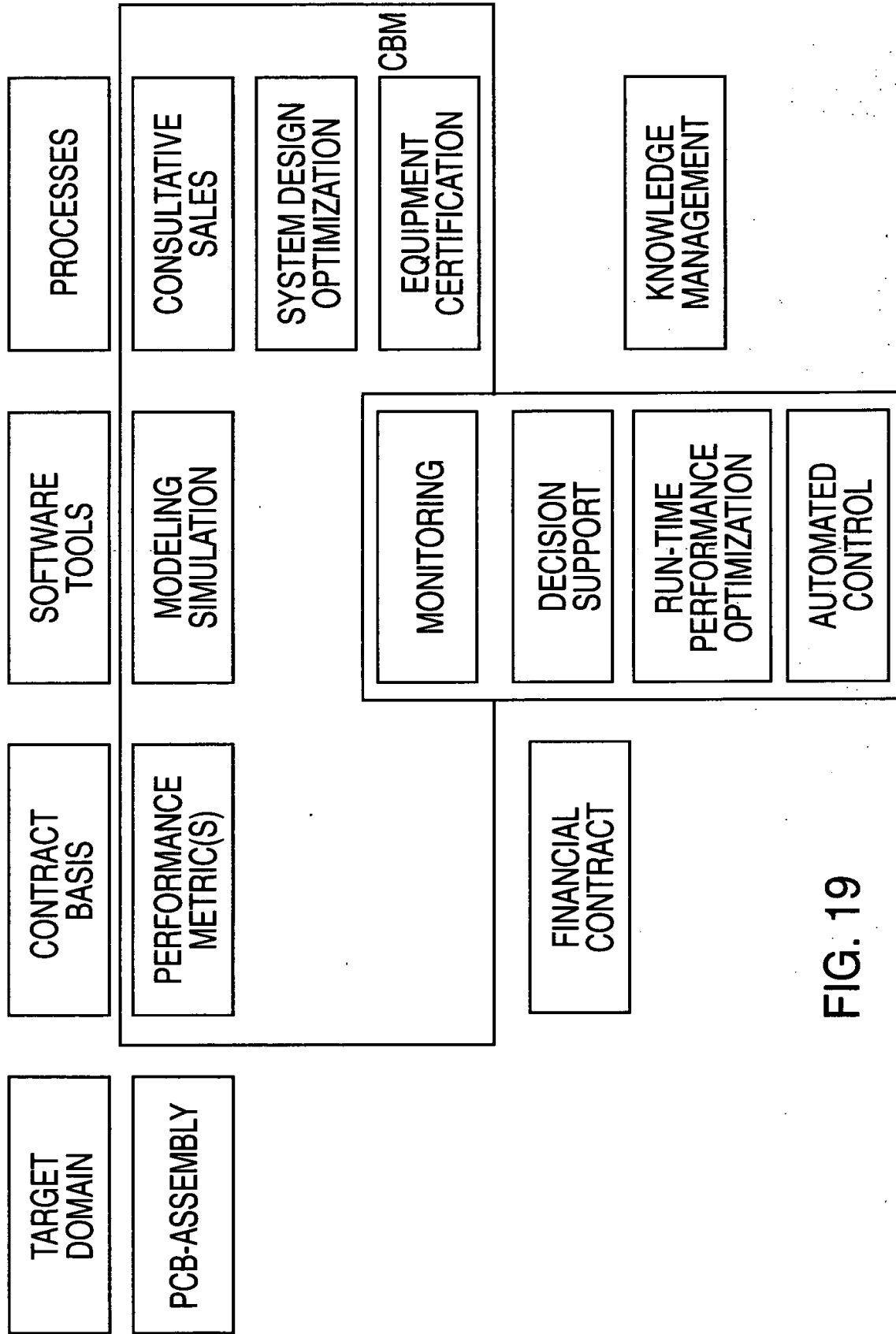


FIG. 19

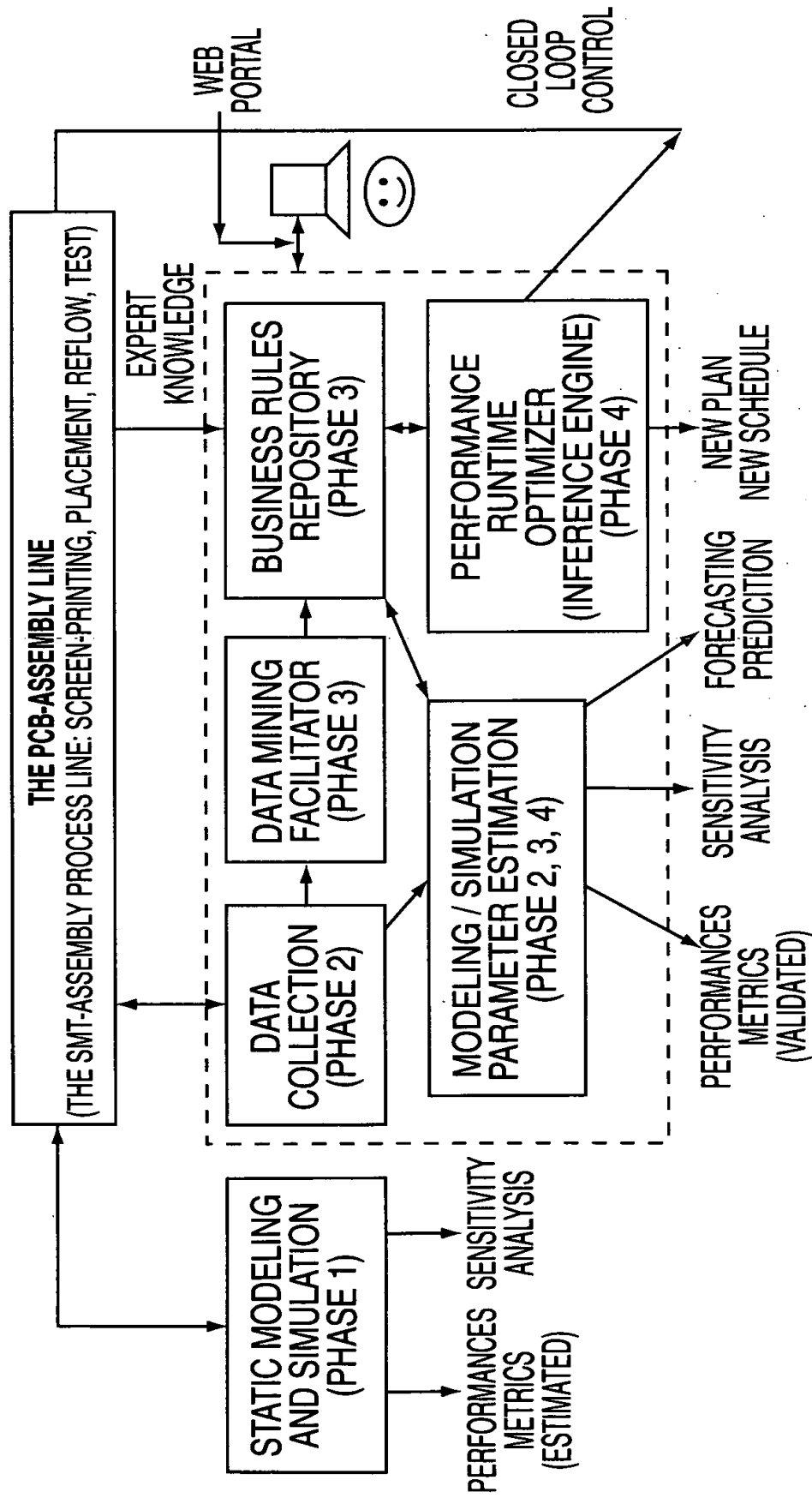


FIG. 20

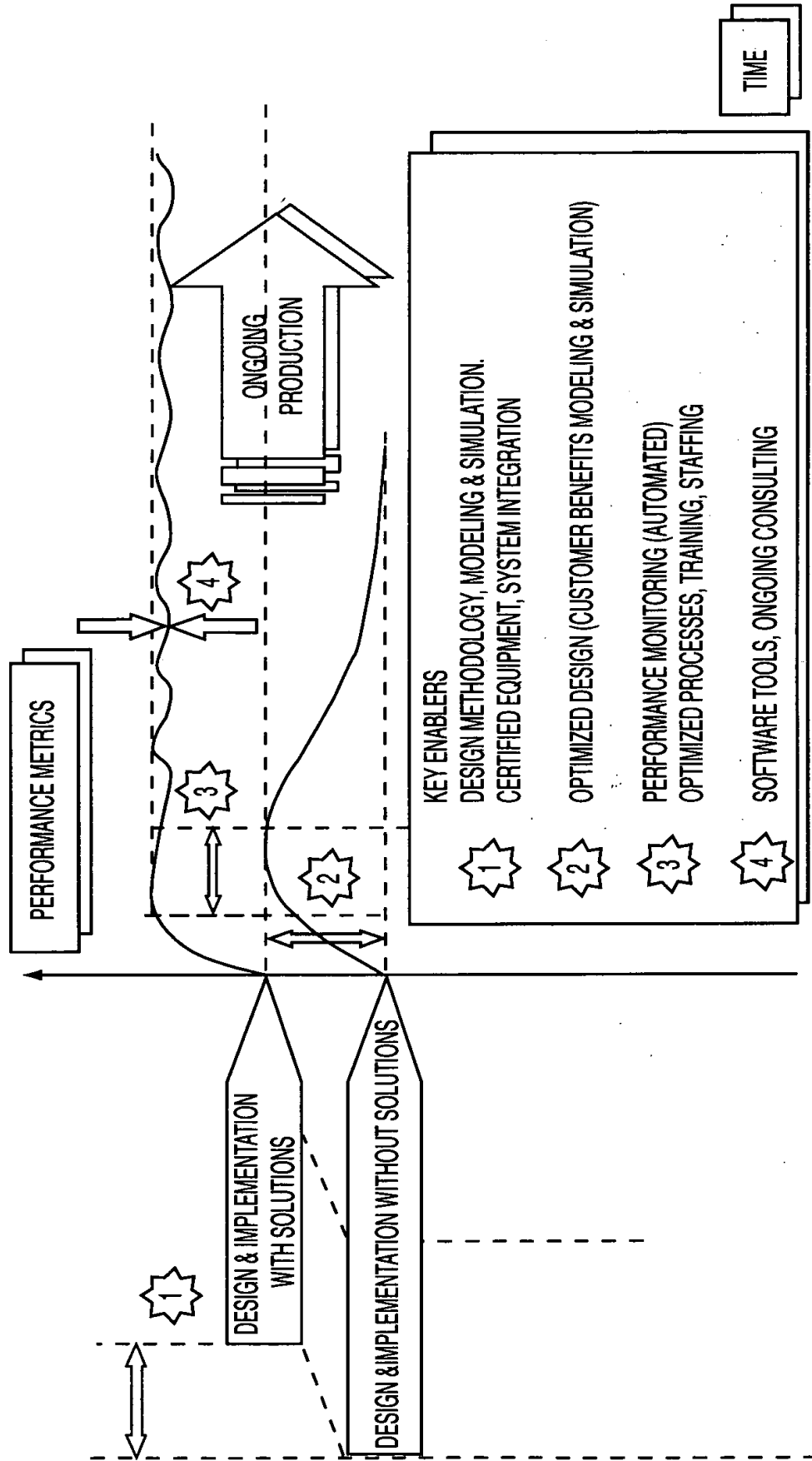
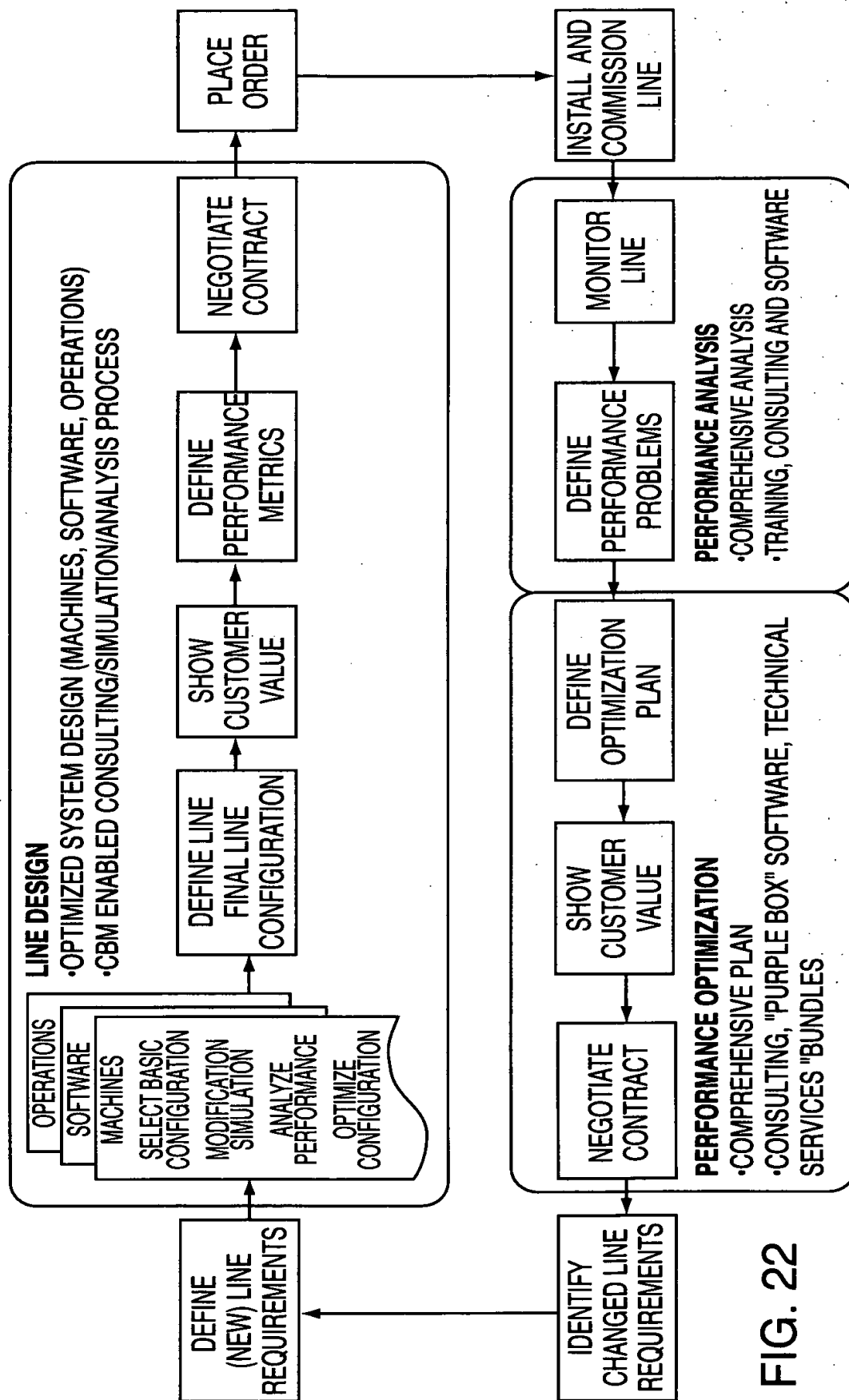


FIG. 21



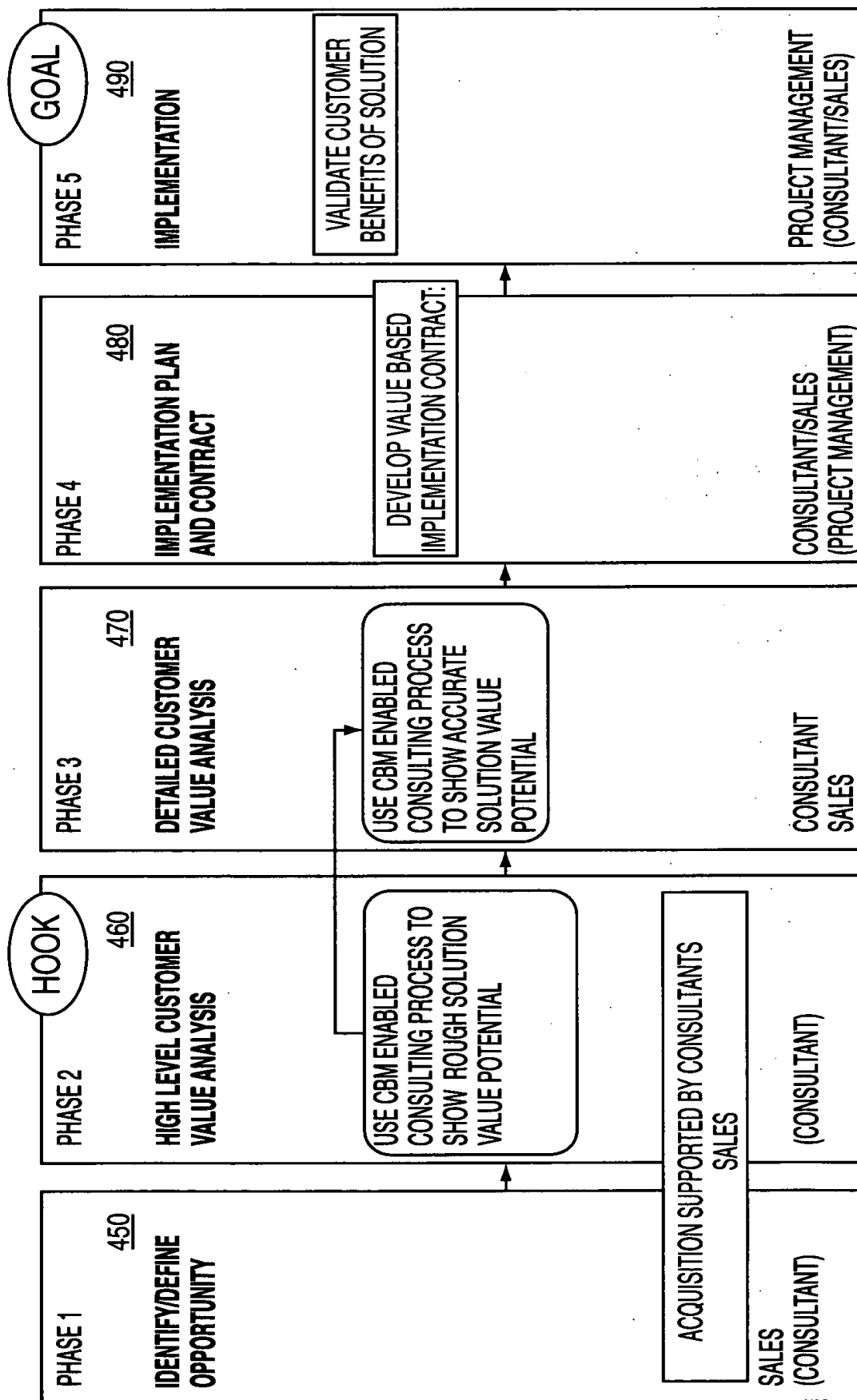


FIG. 23

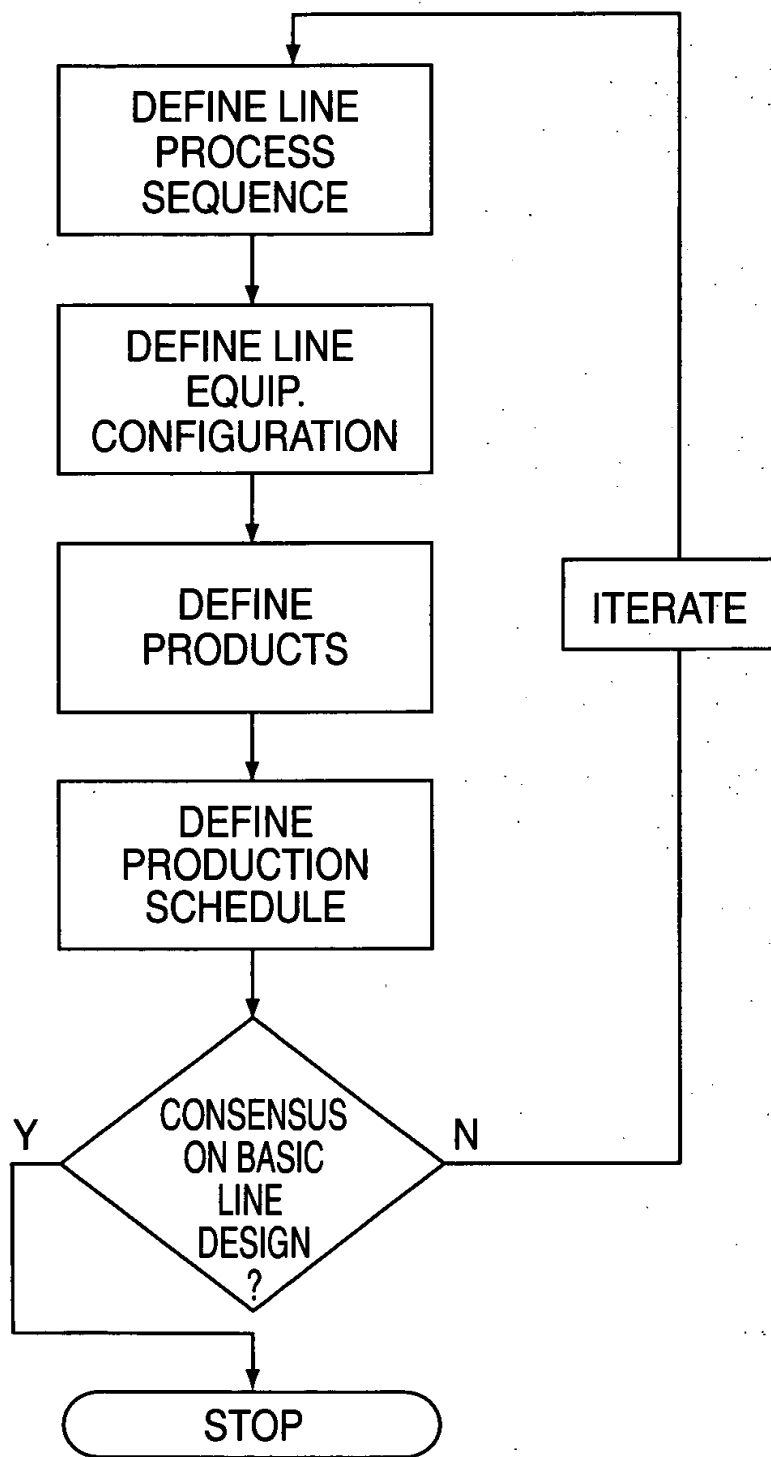


FIG. 24

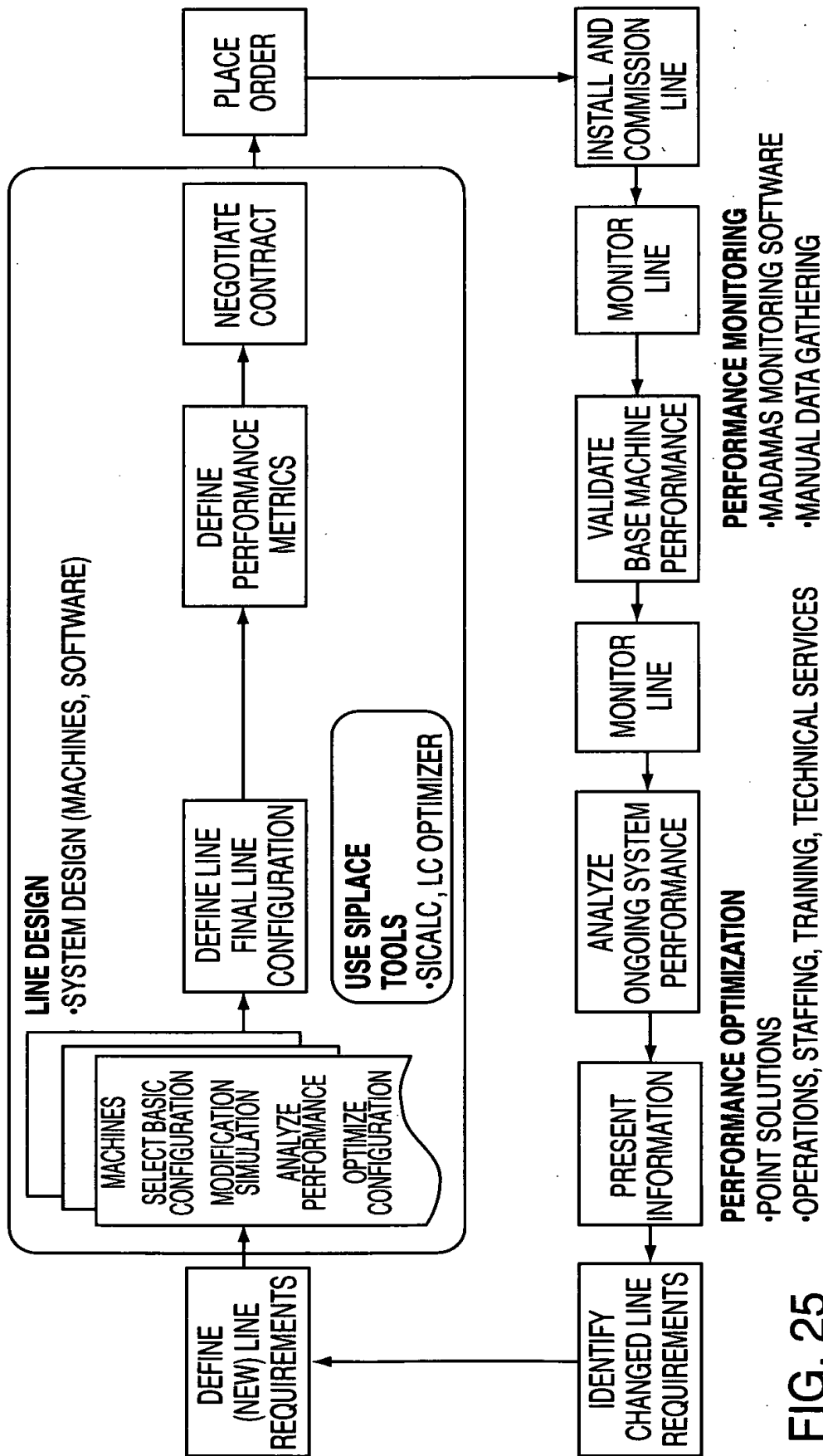


FIG. 25

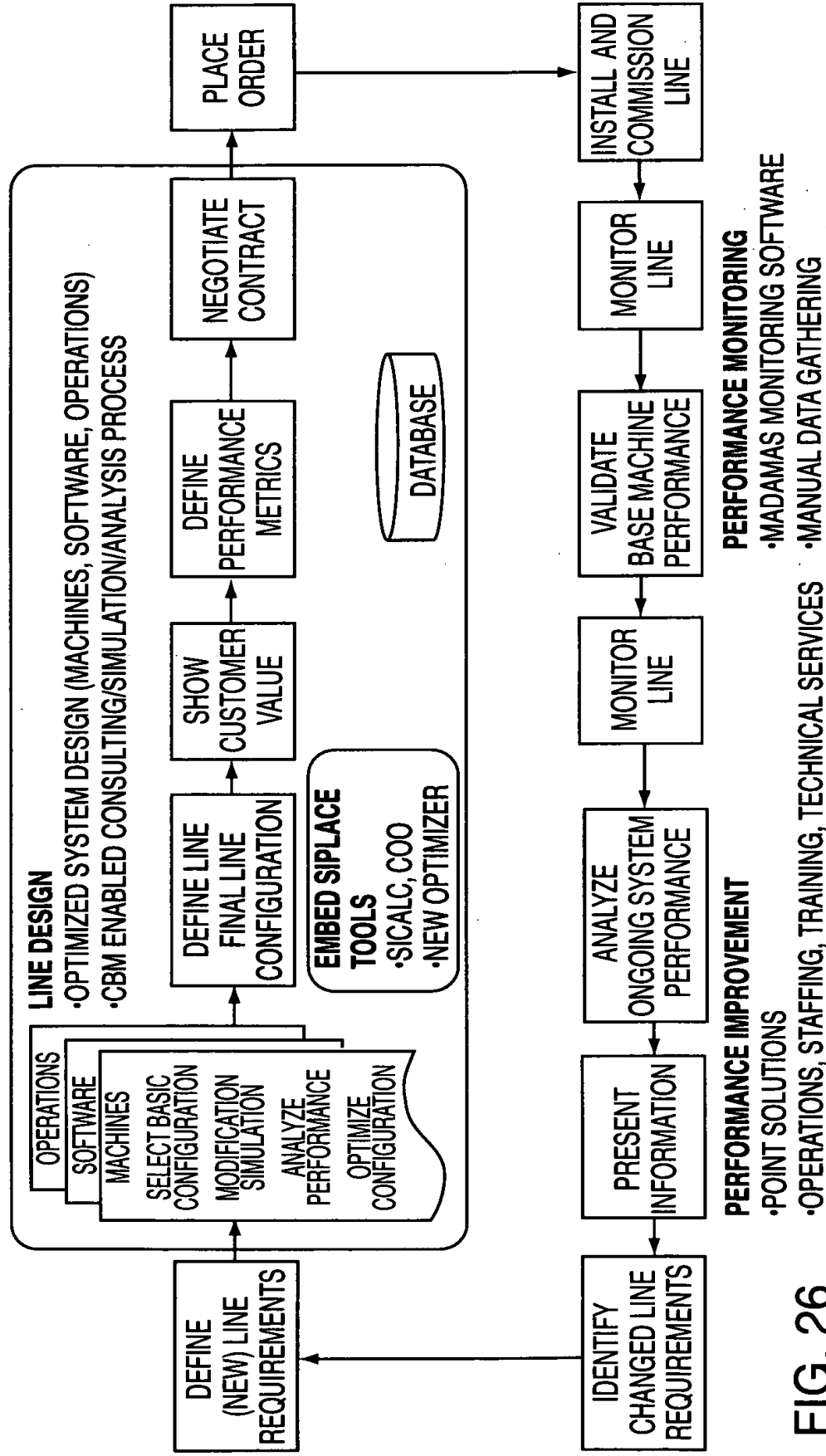


FIG. 26

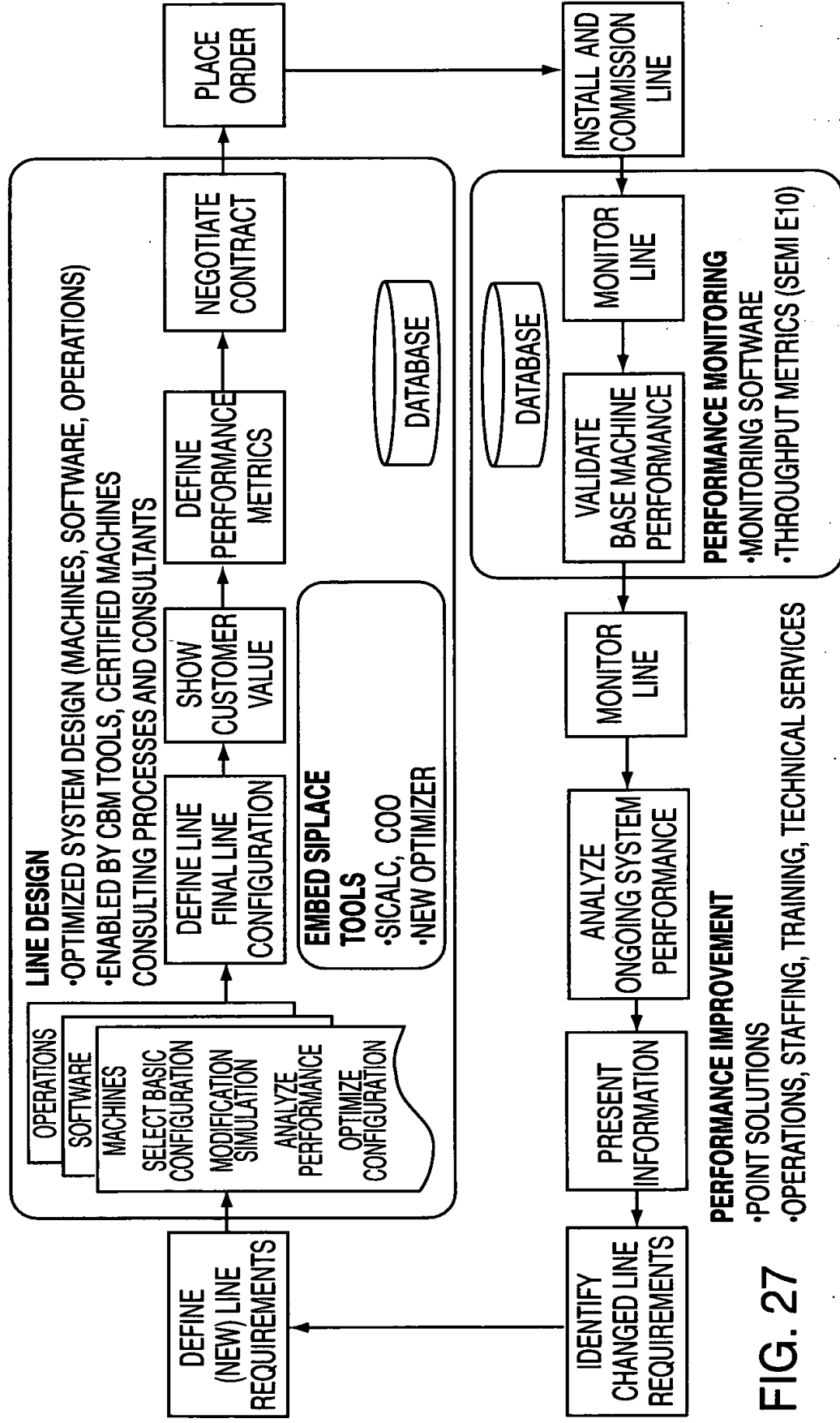
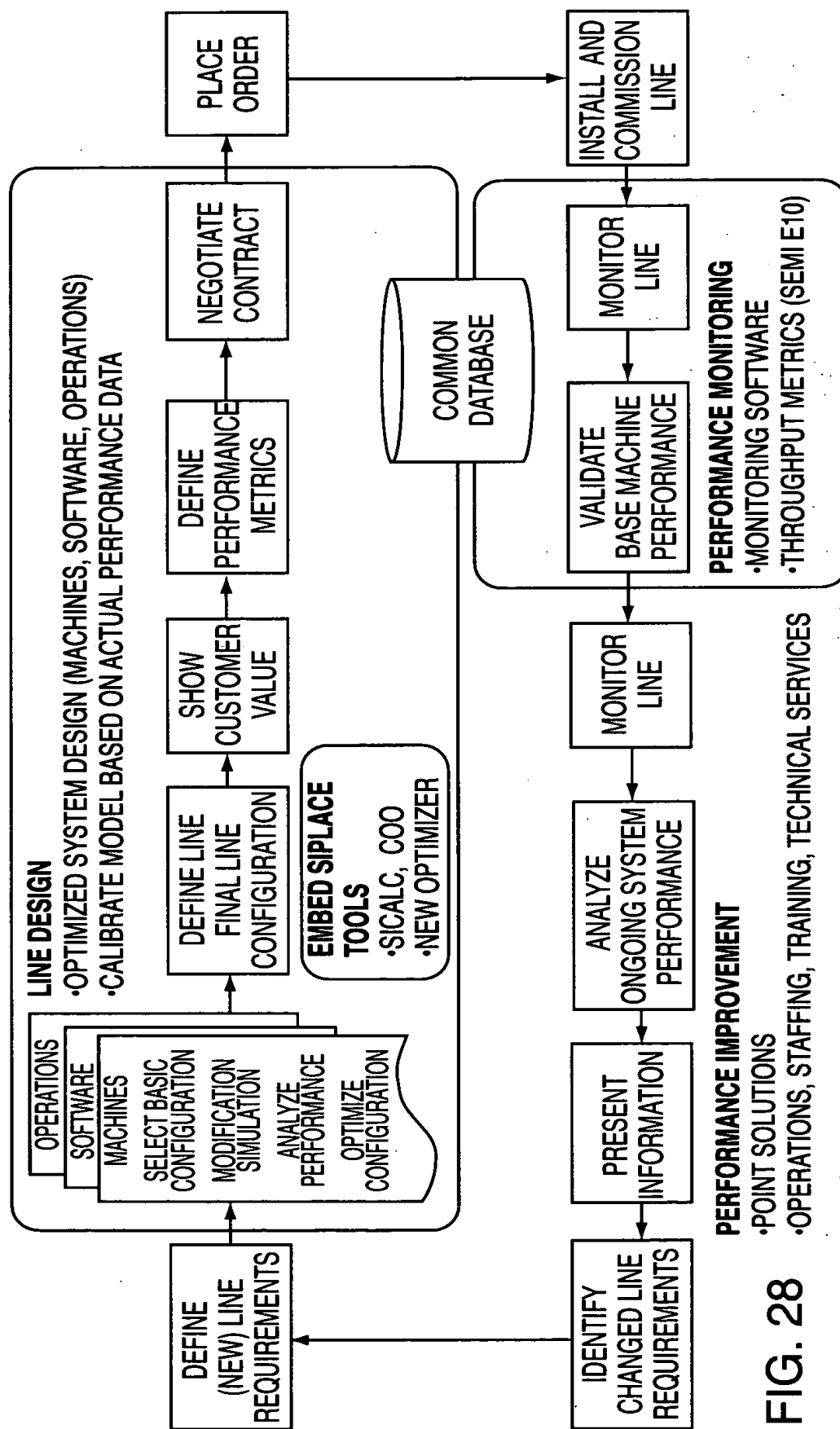


FIG. 27



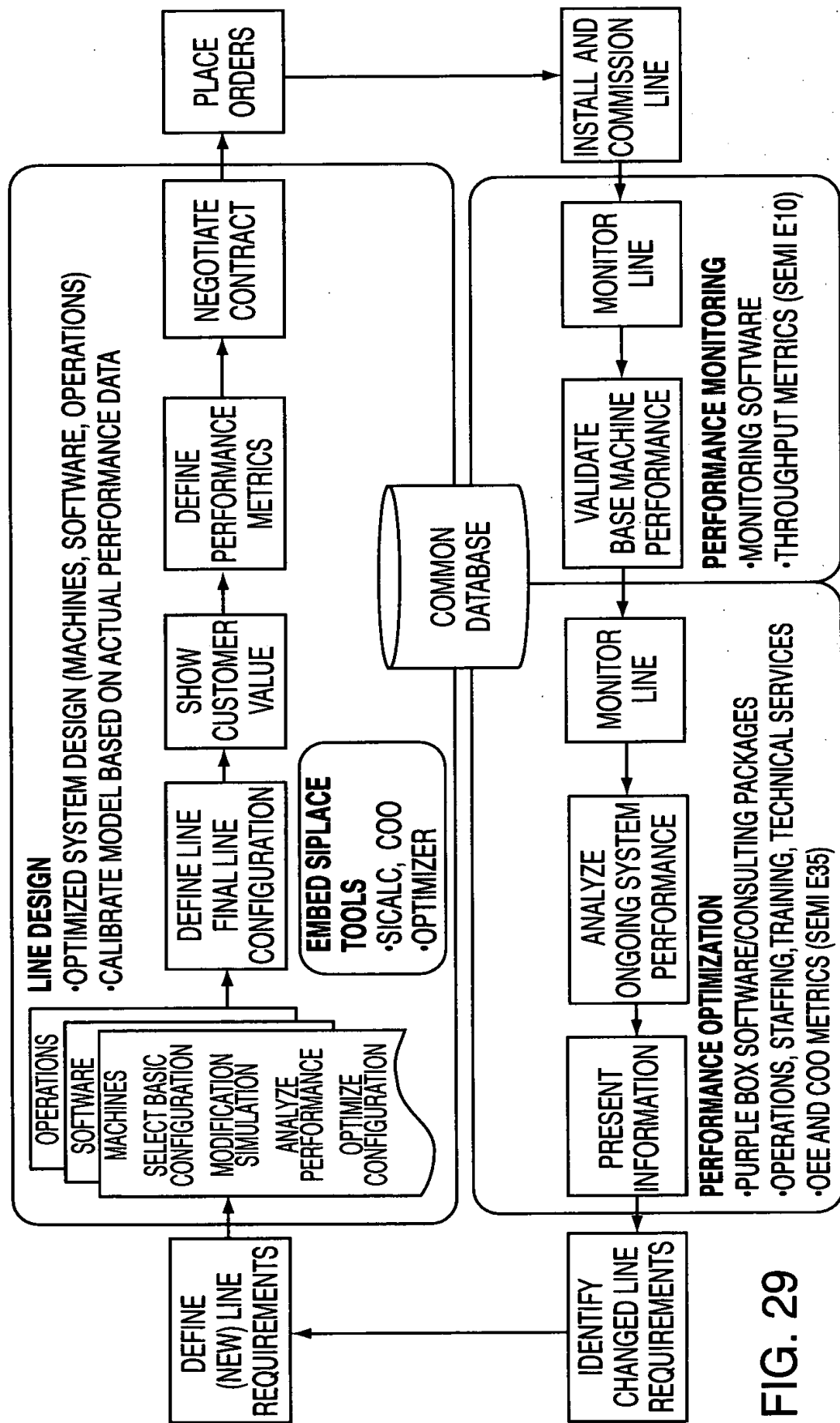


FIG. 29

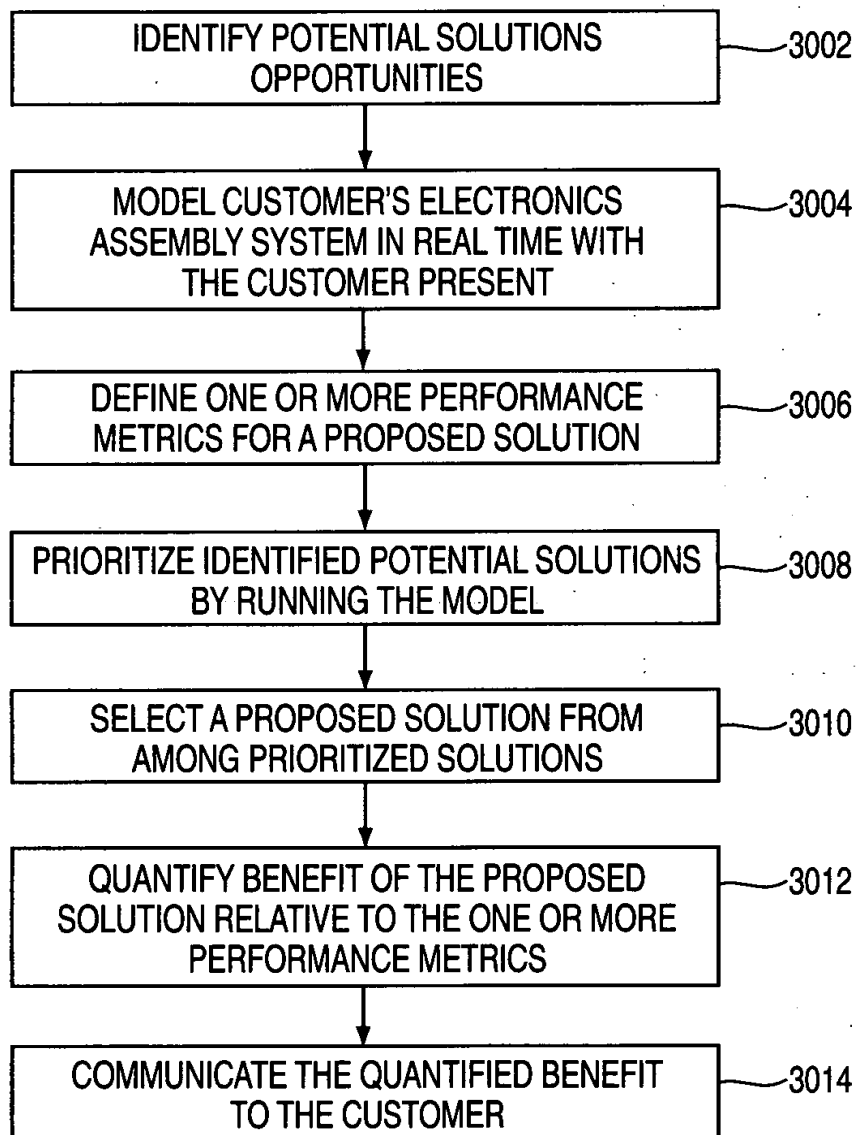


FIG. 30

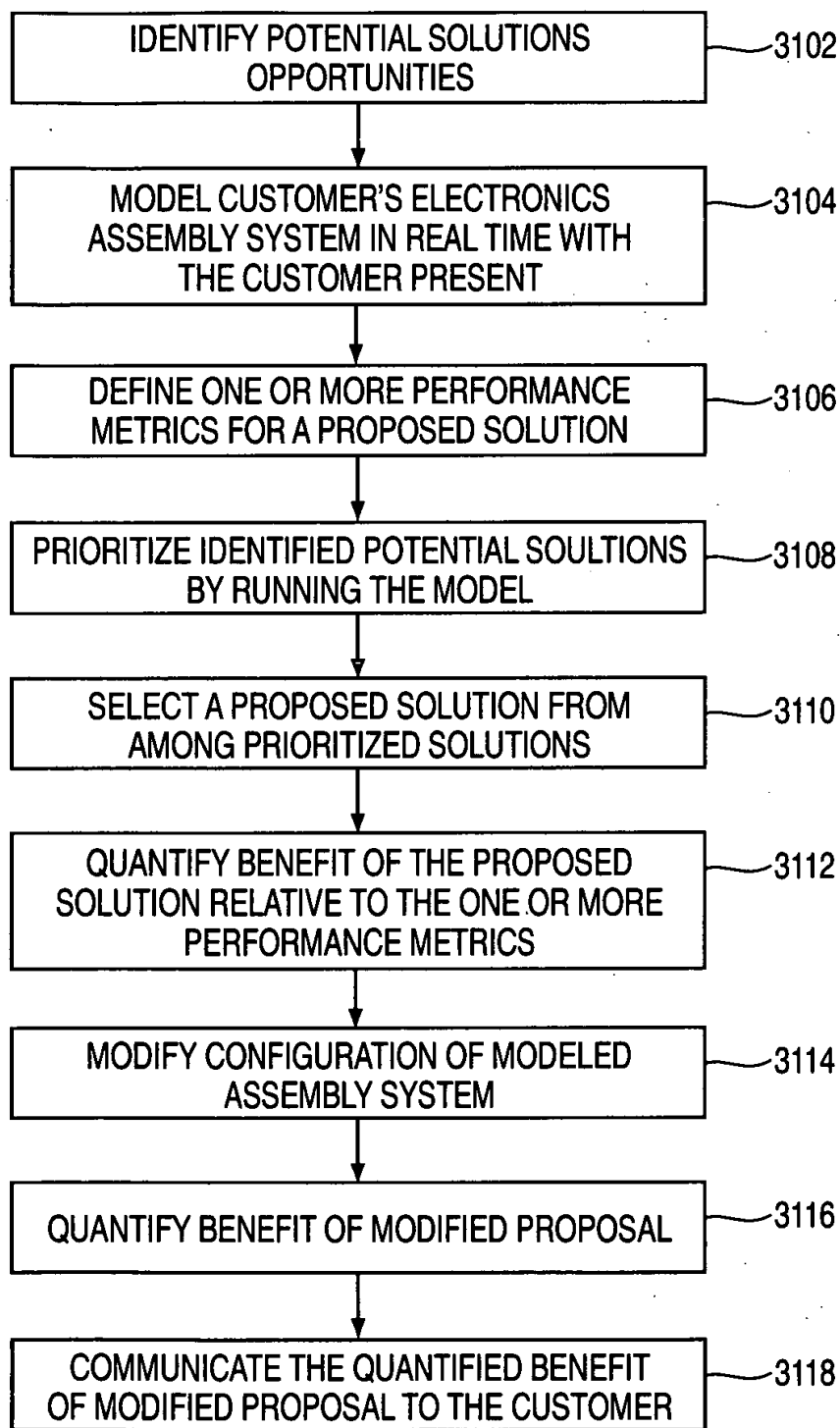


FIG. 31

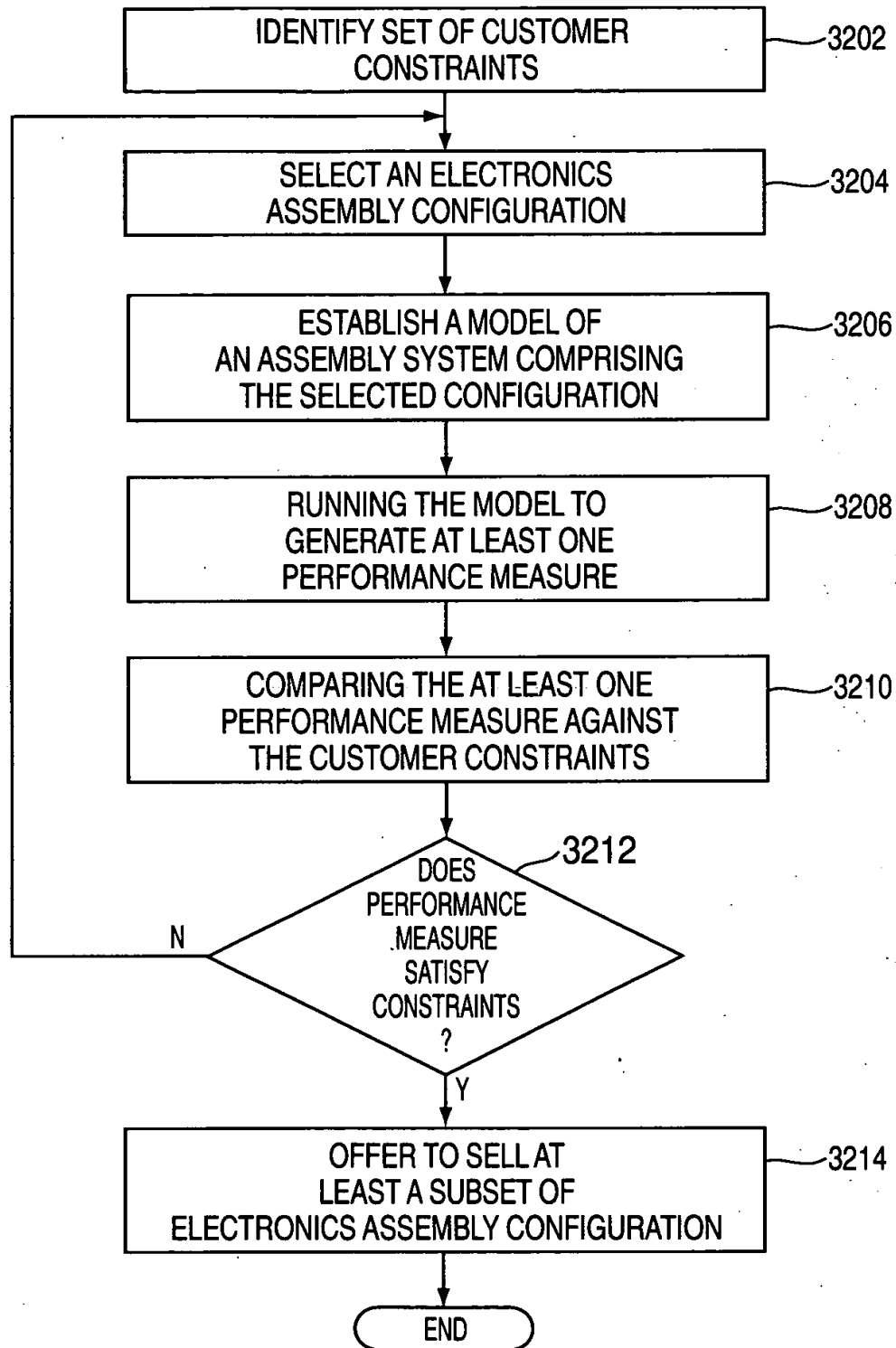


FIG. 32

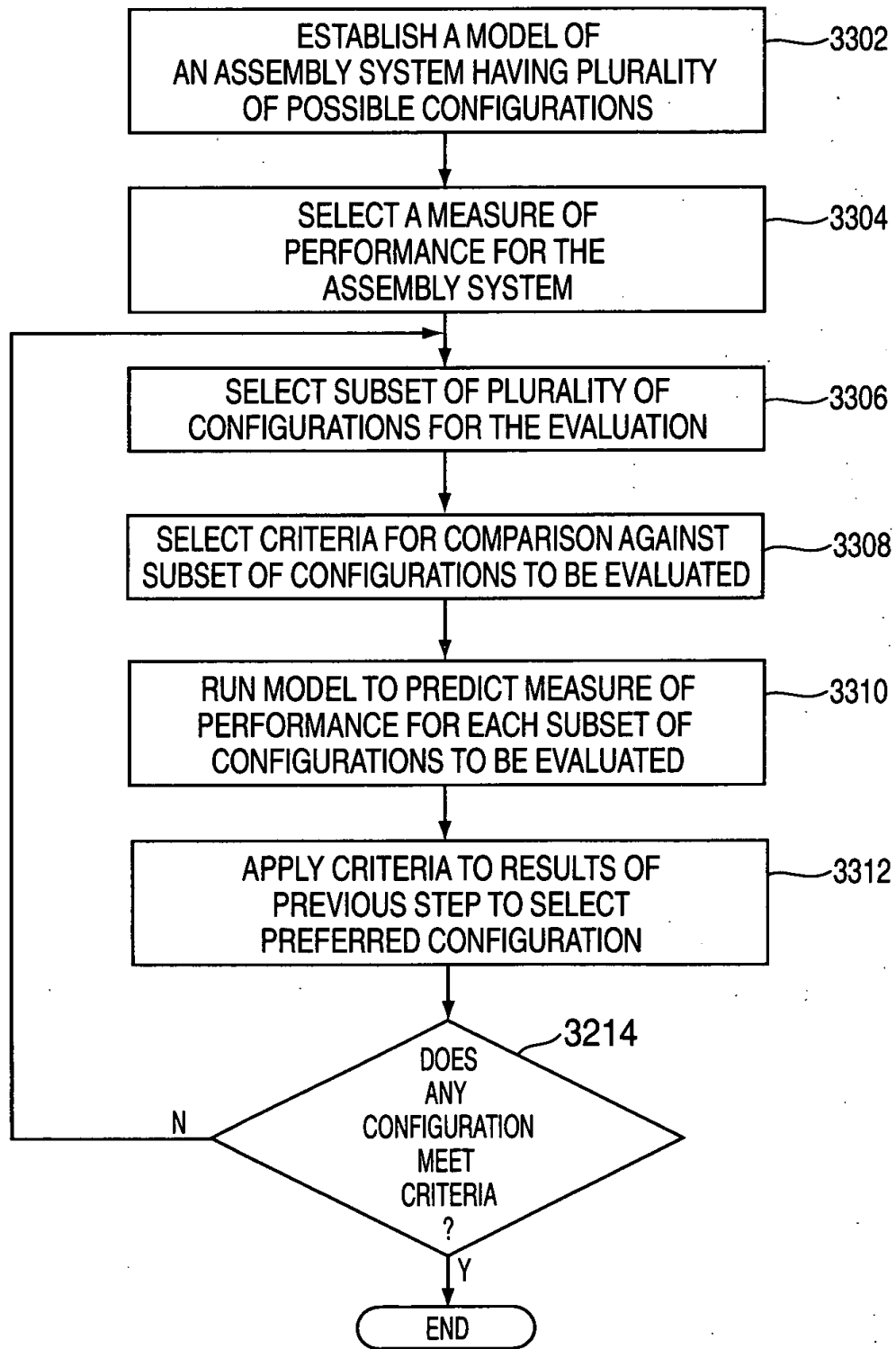


FIG. 33

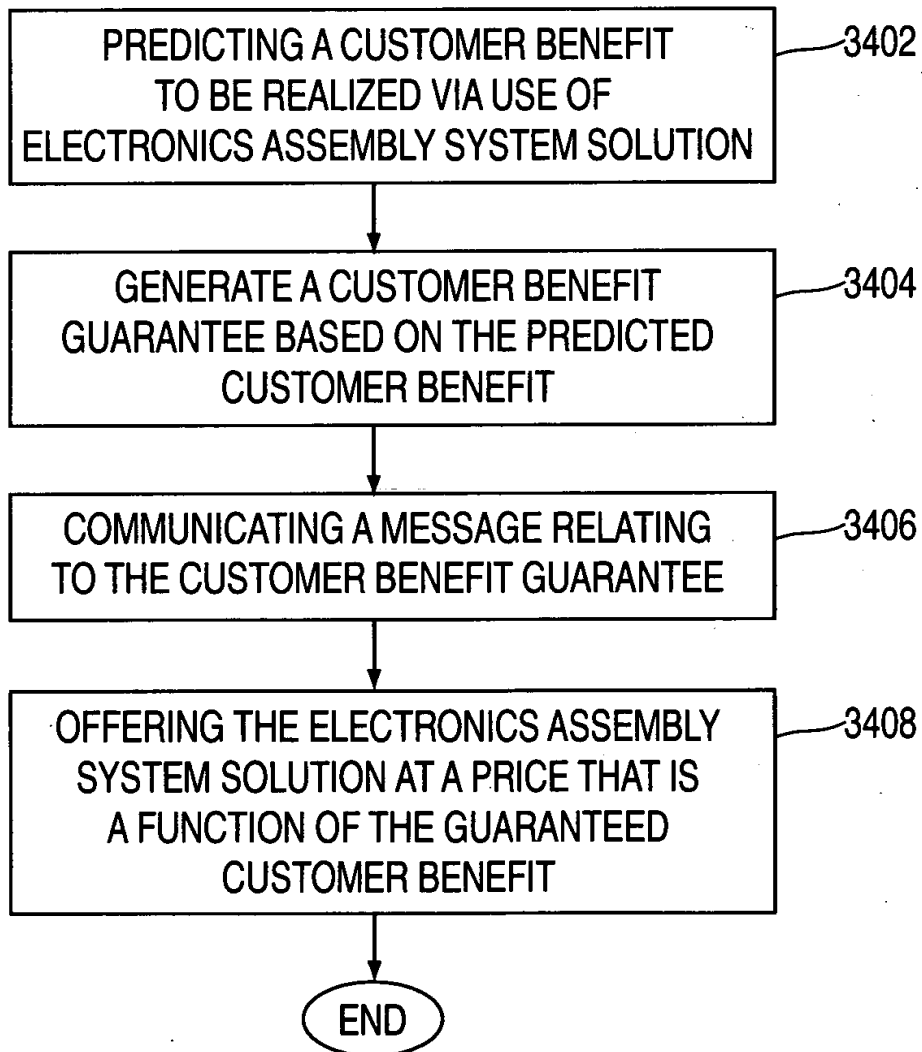


FIG. 34

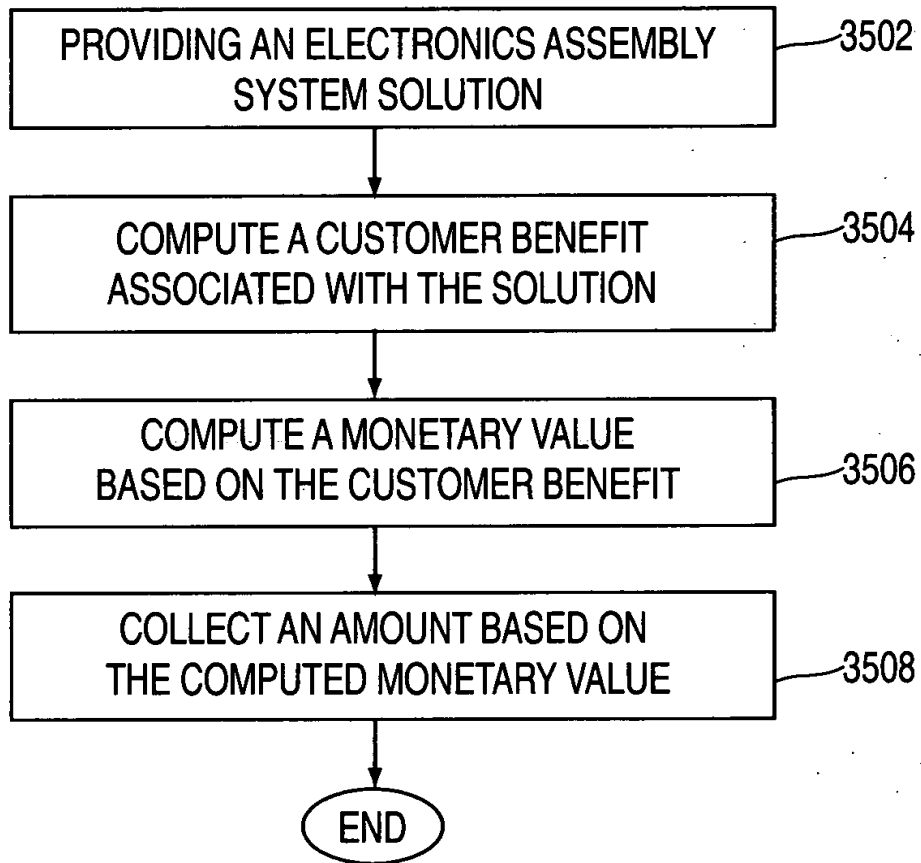


FIG. 35

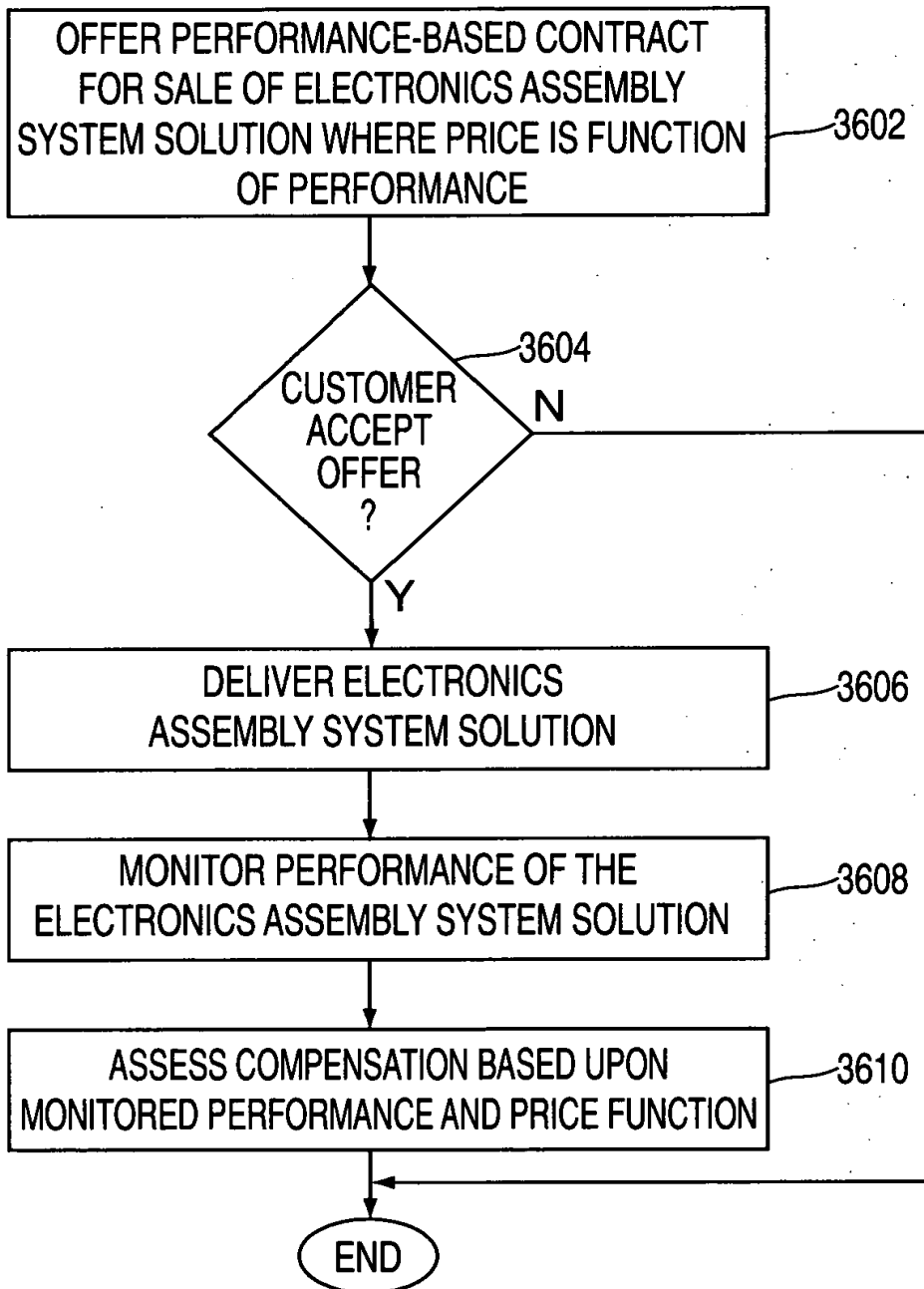


FIG. 36